DOCUMENT RESUME

ED 218 390 UD 022 320

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TITLE A Study of Discrepant Reading Achievement of Minority and White Students in a Desegregating School District: Phase One, Two and Three.
PUB DATE Mar 82
NOTE 176p.; Paper presented at the Annual Meeting of the American Educational Research Association (New York, NY, March, 1982).

EDRS PRICE MF01/PC08 Plus Postage.
DESCRIPTORS *Achievement Gains; Black Students; Desegregation Effects; Educational Improvement; Elementary Secondary Education; *Minority Group Children; *Predictor Variables; *Racial Differences; *Reading Achievement; School Desegregation; *White Students
IDENTIFIERS Cleveland Public Schools OH

ABSTRACT

This study investigated disparities in reading performance among minority and white students in an urban school district undergoing desegregation in 1980-81. Phase one compared minority and white students on reading comprehension test performance. It was found that white students performed significantly higher on the test than minority students, and schools differed significantly on overall average test scores. Phase two ranked a number of secondary schools according to the magnitude of discrepancy in white versus minority reading scores in a school, and compared the top 25 percent with the bottom 25 percent of the schools on several school climate indicators. Results showed that the white-minority disparity tended to decrease between pretest and posttest in the least discrepant schools while that in the most discrepant schools tended to increase, and that the least discrepant schools differed from the most discrepant schools in only one (suspension due to school disruption) out of 62 variables examined. Phase three compared students who gained seven or more reading test points and those who lost seven or more points between pretest and posttest on poverty, race, sex, and other characteristics. The third phase also developed a predictive model for reading achievement based on the variables examined in the study. Tables, figures, and appendices provide extensive, supplementary statistical data to this report. (MJL)

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A STUDY OF DISCREPANT READING ACHIEVEMENT OF MINORITY AND WHITE STUDENTS IN A DESEGREGATING SCHOOL DISTRICT:

PHASE ONE, TWO AND THREE

James Zafirau
Margaret Fleming

- Cleveland Public Schools -

Paper Presented at the Annual Meeting
of the American Educational Research Association

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PHASE ONE, TWO AND THREE

Abstract

This study investigated the nature and extent of disparities in reading performance of Minority and White students in an urban school district implementing desegregation. The study examined relationships between achievement and school climate indicators and identified factors specific to high and low discrepant schools Variables associated with high and low gain student groups were contrasted. Two-way analyses of covariance and multiple regression were used. Results show critical differences between high and low discrepant schools as well as students. Disparity increases with each grade. Complex factors are at work in schools which impact reading and probably other school achievement.

PHASE ONE, TWO AND THREE

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INTRODUCTION

The United States District Court, Northern District of Ohio, Eastern Division, ordered the desegregation of the Cleveland City School District in the matter of the Reed vs. Rhodes case by its Remedial Court Order of February 8, 1978. The Remedial Order, among its many components, stipulated that the school district conduct a study to determine the nature and extent of disparities in the reading test scores of minority and white pupils in the Cleveland Public Schools at the elementary, junior high and senior high school levels. The Remedial Order concluded that evidence presented demonstrated that the percentage of students in Cleveland reading below average increases as the percentage of black students in particular schools increases. The Order stated:

> The Court is persuaded that lower performance scores in schools with a predominance of Black students, though partially explainable by the factor of poverty, are mainly a result of differing racial treatment. Therefore, the Court finds that the reading deficiencies, demonstrated by defendants' reports of test scores are directly and substantially attributable to factors involving racial discrimination.

Implementation of the desegregation plan has proceeded through three stages with students being reassigned in various clusters of schools as of September 1979, March 1980 and September 1980. This study in its attempt to determine the nature and extent of disparities in reading performance of minority and white students as stipulated by the Remedial Order utilizes information from the 1980-1981 school year. At this point of time all students had been reassigned to desegregated settings. This study is part of a larger effort which will encompass the 1981-1982 school year and which will examine performance histories of samples of high and low achieving students

with a view to identifying their experience in segregated schools.

OBJECTIVES

This paper presents interim findings from the initial phase of the court ordered study to determine the nature and extent of reading disparities. Its major objectives include:

1. To determine if there are significant differences between minority and white students in reading comprehension and, if so, whether these differences (where they exist) are pervasive throughout the school system.

2. To identify high and low schools in terms of minority-white reading comprehension discrepancy.

3. To contrast the high and low schools in terms of school climate variables such as income (lunch code/poverty rate), average reading comprehension level, student average daily attendance, suspension rate, corporal punishment rate, percent of whites, non-promotion rate, age advancements, percent of marks of F (overall and by each of the four main areas: English, mathematics, science and social studies) and teacher absence rate.

4. To identify and contrast those students whose relative reading comprehension scores have increased the most with those students whose relative reading comprehension scores have declined the most in terms of such student indicators as reading comprehension and vocabulary pre-test scores, lunch code (family income), race, sex, specific placement and language code.

5. To develop a useful predictive model for school wide reading comprehension achievement from the variables listed above.

It should be noted that for objectives three and five, the data involve secondary schools only. For objectives one, two and four, the analyses reflect data for all grade levels and students for which data were available.

SETTING

This study is being conducted in three phases, as will be

described below, utilizing data for the 1980-1981 school year. The setting for the study, Cleveland, is a large, northern urban school district currently implementing a court ordered desegregation plan. The final stage of this desegregation plan was begun during the 1980-1981 school year. During that year, the average daily membership was 83,488. The racial distribution of students included 67% Black, 28% White, 4% Hispanic, 6% Asian and .3% American Indian. The school district includes elementary, junior high and senior high schools which vary in grade organization. There are three elementary grade arrangements: grade one through grade three, grade four through grade six and grades one through six. All elementary schools have kindergartens. Junior high schools, with one exception, are organized on a grade seven through nine basis. Senior high schools comprise grades 10 through 12. One remaining senior high school includes grades nine through 12. Two schools for handicapped students and nine magnet schools which include both elementary and secondary grades are also operated by the district.

PERSPECTIVES FROM THE LITERATURE

The literature search utilizing sources in the Educational Resources Information Center (ERIC) revealed no counterparts for this study. It did identify an extensive range of desegregation research, a limited number of citations related to racial differences in reading achievement and a burgeoning body of studies with a primary focus on critical features of the educational process and achievement and only incidental emphasis on desegregated studies.

For purposes of background to this effort, a review of selected aspects of this material appears appropriate.

DESEGREGATION LITERATURE

The deseqregation literature is of peripheral value in providing a base for this study. A reading of this literature identifies no parallel situation in which a study was court ordered with a mandated premise representing a conclusion developed from the evidence weighed by the court. The court attributed the reading deficiencies of black students to differing racial treatment. It mandated the objective of the study to be the determination of the nature and extent of disparities in the reading test scores of minority and white pupils. The literature does not have a comparable situation.

The extensive array of desegregation articles reflects about 28 years of endeavor since the Supreme Court decision Brown vs. Topeka Board of Education (1954). The findings have provided both support and disconfirming evidence for the use of school desegregation as an intervention strategy to improve achievement of black students and to close the achievement gap between black and white students. The literature search, therefore, at best offers an historical perspective for this effort. This historical perspective is relevant to understanding the complexities involved in efforts to investigate discrepant achievement between students of various racial groups, although considerably less useful in providing appropriate paradigms for this effort.

Analysis of the literature shows a progression in the studies from social science research which established desegregation policy to field studies of desegregation which assessed the impact of various mandatory and voluntary plans. These efforts have precipitated critical reviews of desegregation research and its findings.

The most recent thrust of the literature has been in the direction of reports of promising practices. These compilations offer examples based upon expert testimony rather than experimental design and describe approaches to desegregation which, in the perception of the experts, can improve educational opportunity and quality.

Desegregation policy has been influenced by social science research. Kenneth Clark (1955) wrote that school desegregation alone would raise black children's self-concept and academic performance to match those of whites. Ollie (1979) notes that Clark was reflecting the prevalent conventional wisdom of the time espoused by many social scientists, but he and others in his field were unable to provide a scientific basis for their opinions. Controversy continued as another major social science research effort, Equality of Educational Opportunity, (Coleman, Campbell, Hobson, McPartland, Mood, Weinfeld and York, 1966) reported that racial segregarion was extensive in American schools and not confined to the South, that academic achievement of black students was positively related to the proportion of white students in schools, that only minor differences existed between the facilities available to white students compared to those available to black students, that family background was highly correlated with student achievement and that schools have little effect on students' achievement that is independent of their family background. The findings fueled debate and provoked extensive reanalysis. (For example: Hanushek and Kain [1972], Cohen, Pettigrew and Riley [1972], McPartland [1968], Murnane [1975] and the U.S. Commission on Civil Rights [1967]). These reanalyses propose that the report's conclusions should be considered tentative until replication with longitudinal data could be done. The Coleman Report earned

its controversial reputation through its conclusions that schools don't matter much and that busing to achieve racial balance is the most effective way to improve the education of minority group children. Critics considered the data base to be inappropriate for analyzing impact of resources on individual children. Several years of reanalysis and discussion attempted to clarify what the Report could and could not tell us. Meanwhile, the Coleman Report figured prominantly and inappropriately in the acrimonious and painful discussions about educational policy.

According to Bradley and Bradley (1977) the Coleman Report provided the impetus for the majority of desegregation field studies predicated on the report's major conclusion that desegregation would result in increased black student achievement despite the fact that the reanalyses had confirmed that the actual effective mechanism for changes in black achievement was not school desegregation but classroom desegregation.

In their critical review of 29 field studies in desegregation, Bradley and Bradley concluded that the data collected since 1959 in studies which attempted to test Coleman's conclusion that school desegregation results in increased black student achievement has been inconsistent and inadequate. They characterize the studies showing positive effects of desegregation as suffering from methodological deficiencies that weakened the validity of their findings and studies that could be described as relatively well designed as providing both support and disconfirming evidence for the use of school desegregation as an intervention strategy.

Greater understanding of the inconsistent evidence concerning the impact of school desegregation on black student achievement could be achieved, in their opinion, through redefinition

of the conceptual framework involved. They recommend utilizing intervention strategies for improvement of academic achievement of black students and various other cultural groups that draw upon such achievement theories as McClelland's (1951). They state:

> Black students' academic performance may be more effectively increased as the situational factors that maximize their classroom motivation may be delineated and replicated within their classrooms in both predominantly black and predominantly white schools (p.445).

Gerard and Miller (1975) emphasize the classroom as the most powerful arena for intervention strategies by stating:

> It is...quixotic to assume that merely placing a Black and White child in the same classroom provides both with the same opportunity to learn...Such an assumption is naive. There is more to the classroom situation than meets the eye...the subtle effects of the social-psychological climate in the classroom on the minority child's achievement (p.303).

St. John (1978) also recommends that new directions for desegregation planning and research with a focus on the classrooms are critical. Two seem appropriate for consideration in the context of this effort:

1. Research effort should now go to examining the classroom process and to testing theoretically grounded propositions regarding factors in the school situation that affect its interracial climate.

2. Policy-makers should give more attention to balancing racial status within schools and less to balancing racial ratios between schools. Principals and teachers should be encouraged to experiment in ways of raising the status of the minority group (p.10).

The current emphasis of desegregation findings is toward proposals for improvement of desegregation efforts and the accompanying evaluation studies. Ollie and Leonard (1979) in this vein offer a model to neutralize the constraints in the desegregation environment.

Citing the disclosures from the extensive literature reviews by St. John (1975) and Weinberg (1979) that academic achievement gaps of black and white children did not close and that desegregation has frequently lowered the self-esteem and vocational aspirations of the black child, they propose a model of policies, practices and program mix to neutralize the constraints in the school desegregation environment. Such programs include the provision of breakfast to students, team teaching/learning programs, big brother/big sister programs, training programs for mothers and programs to diagnose problems that impede learning. Formative evaluation is also an essential part of the plan.

Most recently (1981), the nine-volume Assessment of Current Knowledge About the Effectiveness of School Desegregation Strategies (Hawley) has become available. Representing seven years of study, the report synthesizes findings of some 1,200 studies and experiences of leaders in school districts that have undergone desegregation. This giant work concentrates on strategies for improvement of learning and race relations rather than advocating desegregation as a policy. It draws from information from many sources to provide guides to actions that seem likely to enhance educational equity and quality of desegregating or desegregated schools. Findings from this massive effort show that reassignment of pupils must be buttressed by instructional and organizational changes. Promising strategies and the evidence from the experts as to their efficacy are presented for pupil assignment plans, community preparation and involvement, changes within schools, structural and curricular changes in desegregated schools, inservice training and using school desegregation to effect housing desegregation. The report contends that although its data doesn't prove that desegre-

gation works, it does provide a basis for challenging claims that desegregation does not and cannot result in effective education.

STUDIES OF RACIAL DIFFERENCES IN READING

The ERIC review and search of the bibliographic compilations of the Reading Research Quarterly produced a limited number of citations which report studies of racial differences in academic achievement not specifically associated with implementation of a desegregation plan. The studies identified (Jantz 1974, Asbury 1975, Beard and others 1975 and Trotman 1977) reported discrepancies between black and white studies in reading primarily. While describing trends that have been prevalent in the school districts involved, the studies produce more questions than answers. Jantz called for further research to determine if differences identified were the result of a cumulative deficit phenomenon or if expectations for gain scores obtained for various racial groups should be different. Asbury questioned whether his finding of a difference in maturity in reading achievement as measured by a standardized test indicated that vocabulary instruction and special experiences for black students should be intensified. Beard and others concluded that the narrowing of achievement gaps between black and white students detected in their data from 1961 to 1974 could have been caused either by improved performance in the black group or lowered performance in the white group. The question remained unanswered because of the use of different tests over the years. Trotman (1977) found traditional socioeconomic indicators to be insufficient for assessment of important environmental variables related to IQ. She questioned whether the findings represented disadvantages to be overcome or

differences to be fostered in a pluralistic society.

The studies of racial differences in reading as sampled above suggest the complexities to be investigated in such endeavors. Other than providing narrow perspectives of achievement levels, they are limited in providing appropriate conceptualization of the problem.

EDUCATIONAL PROCESS LITERATURE

The burgeoning body of educational process literature offers a framework for interpretation of findings from this study. Studies which address models of school, teacher, classroom effects with their accompanying proposals for improving learning appear to be fruitful areas for consideration.

Examples of the expanding number of studies on the effectiveness of schools in organizing and managing instruction which provide a framework for analysis of finding include Weber (1971), Madden, Lawson, Sweet (1976) Edmonds and Frederickson (1978), Duckett (1980), Cooley and Leinhardt (1980), Denham and Lieberman (1980) and Leinhardt, Zigmond and Cooley (1981). A most important reassessment of the evidence on school effectiveness (Madaus, Airaisian and Kellaghan, 1980) also is relevant to interpretation of outcomes. The documentation of school effectiveness in these studies establishes a frame of reference for future redirection of resources when schools do not live up to expectations. Potential direction for staff retraining and school reorganization are given. It is interesting to note that the factors described and affirmed in these studies reinforce the need for strong administrative leadership by principals particularly in instructional matters, the need for a safe and orderly climate for learning, the need for a school-wide consensus on the

mission of the school, the need for teacher expectations that all students regardless of family background--can reach appropriate levels of achievement, the need for a system of monitoring and assessing student performance that is related to instructional objectives of the classroom and the need for involvement of parents in the life of the school. Of particular interest to the large urban school districts serving areas with declining economies is the proposition by Edmonds (1979) that a school is not relieved of its instructional obligations when teaching the children of the poor. Edmonds sees the success of these schools occurring because they are determined to serve all of their pupils without regard to family background.

If the models of school effectiveness are critical to interpretation of the findings of this study, so are the findings from the studies of classroom and teacher effects. Certainly effective schools have effective teachers. Improvement of schools will also mean improvement of instruction. The Instructional Dimensions Study (Cooley and Leinhardt, 1980) demonstrates that the opportunity to learn is the strongest consistent predictor of achievement gains and that the instruction should emphazise the cognitive rather than the managerial. The Beginning Teacher Evaluation Study as reported by Denham and Liebermann (1980) identifies the critical factor of "allocated learning time" in increasing student learning. McDonald (1980) stresses the impact of direct instruction by the teacher on student learning and that no one method of instruction is the most effective but rather that effective instructional methods vary according to the situation. Another example of relevant research findings addressing student achievement in reading is that of Leinhardt, Zigmond and Cooley (1981). They conclude that it is increasingly

clear that what children learn from their classroom experiences is a function of what they do during class time. In their study of reading instruction in learning disabled classes where there was a potentially large instructional variation and a wide range of abilities in reading, their data confirmed the assumption that how teachers structured the environment would make a difference in how students spent their time, and how students spent their time would influence the level of reading proficiency they attained at the end of the academic year.

Slavin's report (1980) of the results of 28 cooperative learning field projects in elementary and secondary schools provides another dimension which needs to be considered in improving the classroom. According to Slavin's interpretation, cooperative learning can be developed by teachers to increase student achievement, promote positive race relations in desegregated schools and enhance mutual concern among students and self-esteem.

Finally, Madaus, Airasian and Kellaghan (1980) in their reassessment of evidence related to school effectiveness dispute once again Coleman's pessimistic conclusion that schools bring little influence to bear upon children's achievement that is independent of their background and general social context. However, they document the limitations of current research on school effectiveness and recommend studies to promote a clearer understanding and explanation of the process of schools. Their discussion about expectations that schools achieve equality of output is pertinent to this study. Of prime consideration for this process should be the examination of the schools' goals and the determination of what are realistic expectations for schools. Measures, probably other than standardized tests, need to be designed that are congruent with these goals. The

schools' instructional processes would be in need of particular scrutiny.

In summary, the literature provides no counterpart for this study. Rather, the expanding number of studies focusing on effectiveness of schools and classrooms offer possible guidelines for interpretation of the study results identifying the critical factors which must be addressed if reading achievement of all students is to be improved in the city schools. It would appear to be prudent to promote programs which could develop comparable staff skills and climate factors which have been demonstrated in the research as producing effective schools and classrooms.

FINDINGS

Phase One

Phase One of the study deals with comparison of minority and white students as well as schools in terms of performance on a standardized test of reading comprehension. The analyses were performed on a grade-by-grade as well as comprehensive multigrade basis.

Using the entire data base, (grades four through seven and nine through 11) a two-way analysis of covariance was done with the post-test score being the dependent variable, race and school being the independent variables (main effects) and pre-test reading comprehension score being the covariate.

Results show that the F value for the covariate and both main effects (race and school) is significant ($p < .01$) for each grade level except grade 11. At grade 11, these findings were true except that the null hypothesis could not be rejected with regards to race for grade 11 data at the confidence interval ($p < .01$) selected. This may be due in part to the fact that grade 11 is one of the three

grades in which the pre-test was administered only several months before the post test. In grades nine and ten, however, where a similar test schedule was used, the results did reflect a significant difference in the race effect. It might also be relevant to note that the greatest drop-out rate occurs between grade 10 and 11, which may differentially impact white and minority reading scores. Statistical detail for these findings can be found in Table 1.

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Insert Table 1 here
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The multigrade (4-7 and 9-11) two-way interaction effect indicates the disparity between white and minority students varies significantly ($p < .001$) from school to school, even when pre-test differences are controlled for. However, the significance of the two-way interaction effect between the two main effects (race and schools) varied from grade to grade. (See Table 1.) As can be seen, three are significant and four are not at the .05 level of confidence.

When looking at the comprehensive multigrade data which includes all the scores for all the grades, it is evident that there are significant differences between racial groups and schools in terms of the reading comprehension post-test scores when the reading comprehension pre-test (the covariate) was controlled for. In addition, there was a significant two-way interaction effect ($p < .001$) between the two main effects (race and school). As found at each grade level, the covariate (pre-test reading comprehension score) was significantly different beyond the .01 level.

In summary, white students reflect significantly higher reading comprehension test performance than do minority students,

schools differ significantly with respect to their overall average reading comprehension post-test scores, and the reading comprehension score disparity between white and minority students varies significantly from school to school, even when pre-test differences are controlled for.

Figure 1 graphs the average post-test reading comprehension scores for all grades one through 12. Unlike the preceding analysis, these data were not pre-conditioned on the existence of a pre-test score. The net result is that both more students and more grades are included in the data base. Importantly, this base includes scores for students who were absent for the pre-test.

Figure 1 and Table 2 show the increasing disparity between minority and white student performance levels as grade levels increase.

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Insert Figure 1 and Table 2 here
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Although this is cross-sectional rather than longitudinal data, the size of the sample is so large (54,887) that it might be expected that the same tendency would be found if longitudinal data had been available for each student.

A second point of interest suggested by Figure 1 is that the noteworthy decline in total school performance from the early grades to the secondary grades is primarily explained by the decline in minority performance. Another trend is found in the rapid decline in average reading scores which occurs between grades three and four, six and seven and nine and ten, which are the major points of articulation and reassignment of students to new schools. The causes of such trends are worthy of further study. Tests of linearity and non-

linearity were performed on these overall downward-tending (grade-to-grade) and periodically precipitous scores, confirming the above observations in terms of statistical significance. (See Table 3.)

- - - - - - - - - - - - - - - - -

Insert Table 3 here

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When charting a similar graph (See Figure 2 and Table 4) using the NCE gain scores which require the presence of a pre-test score, the results are somewhat dissonant to those in Figure 1.

- -

Insert Figure 2 and Table 4 here

- -

The gain score chart excludes students who were absent for the pre-test but who were included in the post-test based trend shown in Figure 1. The results, as graphed, clearly do not convey the same extent of minority to white disparity in terms of reading comprehension performance. This suggests that those who tended to be absent for the pre-test, and probably have a higher overall absentee rate, contribute significantly to the trend shown in Figure 1, i.e., the widening disparity between white and minority reading comprehension scores. This phenomenon requires further investigation.

Phase Two

For Phase Two, this study was currently limited to the secondary schools (24 junior and 15 senior high schools). In the future, these Phase Two procedures will be done on elementary school data as well. These data were analyzed using a series of t-tests to test for significant difference between the high and low discrepant schools in terms of 62 variables.

The unit of analysis was the CTBS Reading Comprehension

NCE score. A gain score for each student was also derived by subtracting the pre-test score from the post-test score. The 24 junior high schools and the 15 senior high schools were separately ranked by terms of the extent of school-wide minority to white differences in terms of both average CTBS Reading Comprehension NCE post-test scores for each group and average CTBS Reading Comprehension NCE gain scores for each group. The 25 percent of the junior and senior high schools (6 junior and 4 senior high schools) displaying the greatest reading comprehension discrepancy between white and minority students were contrasted with the 25 percent of the junior and senior high schools (6 junior and 4 senior high schools) displaying the least amount of white/minority student discrepancy, and were grouped first in terms of the post-test score based rankings and then in terms of the average gain score based rankings. The top and bottom 25 percent of the schools were contrasted in terms of such school climate indicators as: average poverty rate (lunch code), average daily attendance rate, suspension rate, rate of corporal punishment, percent of white contrasted to minority students in the school, nonpromote rate, age advancement rate, percentage of F grades given (total, and by the major areas of English, mathematics, science and social studies), and teacher absence rate.

The analyses were as interesting in what they did not show as significantly different between the top and bottom schools in terms of discrepancy as in what they did show as significantly different. In terms of the post-test only based disparity rankings, the top 25 percent were significantly different from the bottom schools only with respect to two (both reading comprehension-based) of the 62 variables investigated. The post-test reading comprehension scores for the white students in the least discrepant schools were significantly lower than

in the most discrepant schools (p .001, 41.7759 vs. 49.1815 average NCE). (See Appendix A). However, the post-test reading comprehension score for the minority students was not significantly different for the two groups (37.8 vs. 37.6).

Insert Table 5 here

The difference between average minority student and average white student gain reading comprehension NCE gain scores was significantly higher (in favor of the minority students) in the least discrepant schools ($p < .013$, 2.2008 NCE gain in favor of minority students in contrast to -.3140 NCE gain in favor of the white students in the most discrepant schools). In other words, the minority students in the least discrepant schools tended to close the reading comprehension disparity gap between themselves and the white students between pre- and post-testing (i.e., during the 1980-81 school year), whereas the minority students in the most discrepant schools slightly widened that school based disparity. These two facts can be understood better when it is noted that the white students in the least discrepant post-test schools actually declined an average of 2.68 NCE's while they increased slightly in the most discrepant schools (p=.18).

The second set of comparisons were based on a ranking of the reading comprehension based gain scores. These least discrepant schools differed ($p < .05$) from these most discrepant schools only in terms of one variable out of 62 variables. This variable is the rate of suspension given for one of the five major reasons for suspension in the school district: disruption of entire school. These least discrepant schools had a related average suspension rate of of 22.1901 percent of the average daily attendance in contrast to 13.5196 for the most discrepant schools ($p < .03$). (See Appendix B.)

Phase Three

The purpose of Phase Three was to compare high and low achieving students in terms of data available in the Pupil Master File and to develop a predictive model for reading comprehension.

First, a comparison was made between that group of students who gained seven or more CTBS Reading Comprehension NCE points between pre and post testing and that group of students who declined by seven or more NCE points during the 1980-81 school year, in terms of such variables as poverty index (lunch code), race, sex, placement code, primary language spoken at home and grade level.

The data base from which this ten percent random sample was drawn included all students in all grades for which data were available. A series of t-tests was used to compare these two groups of students in terms of each of the variables listed above. Significant differences ($p < .001$) between these groups occurred for the following variables: pre-, post- and gain NCE scores for both reading comprehension and vocabulary; age; and, relatedly, student grade level at the 1980-81 post-test time, as well as during the current 1981-82 school year. That student group which lost seven or more NCE points had significantly higher reading vocabulary and comprehension pre-test scores: but significantly lower post-test and gain scores. (See Appendix C for statistical detail.)

In contrasting the group of students who gained the most in terms of reading comprehension with that group who lost the most in terms of reading comprehension, it was found that the average NCE pre-test scores were 50.9 and 35.3, respectively, while a near reversal of 35.9 versus 51.3 was found for the post-test! Why did this occur? It seems unlikely that this phenomenon can be accounted for solely through

error of measurement, regression towards the mean effect and the like. Findings from Phase Two, based on school-wide data, might lead us to hypothesize that such groups might vary significantly in terms of their absenteeism rate, suspension rate, in interest and motivation and the like, since absenteeism and suspension rates were found to be highly correlated with the percent of F's, the non-promote rate and average achievement scores on a school-wide basis. Establishing the exact reasons for this phenomenon requires further investigation. A follow-up study of this student sample is currently underway to include these additional variables so that these questions can be more fully answered.

Average for the greatest gain group was significantly lower (13.2 years vs. 13.6 years), as was the average 1980-81 grade level (6.3 vs. 6.8) and average 1981-82 grade level (6.8 vs. 7.3), than for the negative gain group. This indicates that those students showing the greatest erosion of their relative reading comprehension standing are significantly older and at a higher grade level than those making the greatest gains. It is noteworthy that the average poverty rate (lunch code) does not vary significantly between these two groups.

With respect to race, sex, placement code, primary language spoken in the home, and lunch code category, no significant differences were found between these two groups of students. (See Appendix D.) However, there were significant differences shown between grades in terms of the ratio of the number of students gaining seven or more reading comprehension NCE points from pre- to post-test and the number of students declining seven or more NCE points. It is noteworthy that the proportion of minority students is not significantly greater in the high reading decline group (i.e., NCE gain ≤ -7) than in the high reading gain group (i.e., NCE gain ($\geq +7$). Category frequencies in con-

junction with the chi-square test of significance were used to achieve these findings.

The second part of Phase Three of this study pertains to developing a predictive model for reading comprehension achievement, using the list of variables given above as predictor variables. Stepwise multiple regression was employed to develop a predictive model for both a school's average reading comprehension post-test score and a school's average reading comprehension gain score. A multiple regression coefficent of .699 (explaining 48.9% of the variance) was achieved for predicting a school's average reading comprehension post-test score. The variables (and the R square change they caused--the increase in total explained variance they contribute), in the decreasing order of their sequential importance, are as follows: percent of F's given in the school (33.7%), average poverty rate (7.7%), percent of white students in the school (1.7%), rate of student attendance (1.3%), school suspension rate for reason five (1.6%, reason 5: disruption of entire school), school suspension rate for reason two (1.8%, reason 2: fighting, hitting and pushing), school suspension rate for reason four (.5%, reason: failure to attend school/classes on time), and lastly, the two remaining suspension reasons and the school's teacher absenteeism rate (each added less than .5% explained variance). (See Table 5 for greater statistical detail.)

Insert Table 5 here

Because the percent of F's given in a school could be considered a consequence of a final end-of-year reading achievement level (or at best concurrent with it), a second multiple regression equation was developed excluding the percent of F's variable and with all types

suspensions combined into an overall school suspension rate, for simplicity. The multiple regression coefficient derived for predicting post-test reading comprehension from solely antecedent (although not necessarily controlable) variables was .665, yielding a total explained variance of 44.2 percent. The variables (and their contribution to total explained variance) as entered into the stepwise multiple regression equation are as follows: the school's average student attendance rate (26.3%), the school's poverty rate (11.5%), the school's percentage of white students (6.2%), and the school's total suspension rate (.2%). Teacher absence rate was excluded from the equation because its contribution was insignificant. (See Table 6 for more statistical detail.)

Insert Table 6 here

School average reading comprehension gain scores (post-test NCE minus pre-test NCE) were predicted using the same complete initial set of predictor variables and stepwise multiple regression analysis as in the first instance. A multiple regression coefficient of .665 (total explained variance equalled 44.2%) was achieved from a set of nine predictor variables, with the percent of whites in school variable dropping out because of its insignificant contribution to the equation. The variables (and their contribution to explained variance) as entered into the stepwise multiple regression equation are as follows: school poverty rate (21.2%), student attendance rate (7.6%), rate of suspension for reason four (5.1%, reason: failure to attend school/classes on time), rate of suspension for reason five (3.7%, reason: disruption of entire school), rate of suspension for reason two (2.3%; reason: fighting, hitting and pushing), and lastly, the three remaining variables of percent of F's given, teacher absenteeism rate and suspension reason

three (failure to attend all assigned classes) each of which contributed less than 1% of additional explained variance in the school's average reading comprehension gain score. (See Table 7 for additional statisical detail.)

Insert Table 7 here

SUPPLEMENTARY FINDINGS

The problem of what the differences are, if any, between respondents and non-respondents in a sample continually perplexes researchers. In this study, those students who were missing one of the reading comprehension tests (pre or post) were necessarily excluded from all analyses requiring both a pre and a post-test. Because only in grades 4,5,6,7,9,10 and 11 during the 1979-80 school year was the city-wide reading comprehension test given, the remaining five of the 1-12 grades were excluded from all related analyses. These particular grade level exclusions were not associated with any known student differences. However, within the seven grades wherein both the pre and post-test were administered, a missing score reflected that the student was absent from school on that day. Although representing an attendance sampling of only two days, the student sample was sufficiently large (total population representing 30,676 paired scores) to presume that the typical year long attendance for those, as a group, who were in attendance for both testings was reliably better than was the 1979-80 attendance for those present for the post-test but absent from pre-test. From this premise it was expected that, using individual student data, those students with the better attendance (present for both pre and

post-test) would score higher on the reading comprehension post-test (and other related measures) than would those students with poor attendance, but for whom there was at least one useful data point for making this comparison (a post-test score but no pre-test score). Since at no grade level were the pre and post-test (reading) of the same form and level; and since the time between pre- and post-testing was one full year; and since the unit of measure was the standardized and interval normal curve equivalent (NCE), with good correspondence between the normed test date for scoring and the actual test date; threats to internal validity such as testing, practice effects and instrumentation were minimized. At each grade level for which data was available, the results showed that the average reading comprehension post-test score for those with better attendance was higher than for those with poorer attendance (as defined). These results are graphically presented in Figure 3. These results were also independently confirmed

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Insert Figure 3 here

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for minority students as a subgroup (Figure 4) and for white students (Figure 5). Taken as a whole, the 4,171 post-test only (poorer attendance) students averaged 37.7 NCE's in comparison with the 26,505 pre and post-test (higher attendance) students, who averaged 43.3 NCE's, for a between group difference of 5.6 NCE's, which is an educationally important difference.

Insert Figure 4 and Figure 5 here

Additional comparisons were made between high and low attendance groups. For the following series of comparisons, the high attendance student was defined as a student who took both the pre and post

reading comprehension tests. The low attendance student was defined as that student missing either the pre or post reading comprehension test score (i.e. she/he was absent for at least one testing). This definition of the low attendance student is an expansion of that used in the prior set of analyses (resulting in different numbers of students analyzed and accommodates a larger set of comparisons while remaining essentially the same in terms of the construct it measures. A series of t-tests performed comparing these high and low attendance groups of students reveal that the high attendance students were significantly different from the low attendance students with respect to following at a level of $p < .01$ significance. These data are presented in the descending order of the absolute t-value:

- The average age on December 1, 1981 was less (13.54 vs. 14.78, for average difference of 1.23 years);
- The average 1980-81 school grade level was less (6.687 vs. 7.440; for an average difference of .753 years); in conjunction with the average age difference this probably shows that the low attendance students reflect more non-promotions and that disinterest in school is cumulative, becoming more pronounced at a greater age and grade level);
- The average pre-test reading vocabulary NCE score was higher (45.3 vs. 40.2):
- The average pre-test reading comprehension NCE score was higher (43.49 vs. 38.72);
- The average post-test reading comprehension NCE score was higher (43.44 vs. 37.82);
- The average post-test reading vocabulary NCE score was higher (45.71 vs. 40.09);
- The average poverty rate was lower (as measured by the proportion of school lunch-taking students receiving them on a free or reduced price basis; (6.29 vs. 6.19; with 6 = free; 7 = reduced price, and 8 = student paid lunch);
- The proportion of girls was higher (1.51 vs. 1.44; with male - 1 and female = 2);

. The proportion of white students was lower (5.25 vs. 5.31, with 5 = minority and 6 = white students); in conjunction with the sex based comparison, this probably means that white males are more likely to be absent than any other sex and race based group).

Although the smallness of the number of high absence group students (as defined) with pre and post reading vocabulary test scores reduced reliability to such an extent that statistical significance could not be achieved, the direction and simple magnitude of the results suggest that low attendance students do not grow in their reading skills as well as do the high attendance students. See Appendix E for greater statistical detail, with respect to all of the preceding results.

The finding which reveals that the low attendance group has proportionately more white students than does the high attendance group is surprising, and even inconsistent from a certain point of view, since previous findings clearly show, in general and system-wide, that: (a) white students score significantly higher than do minority students with respect to reading comprehension post-test scores, and (b) that those with better attendance get better reading comprehension scores than do those with poor attendance. From these two facts, considered alone one might conclude that white students would score higher, at least in substantial part, because they have a better attendance pattern. These supplemental findings take exception to this supposition. On the one hand it might be suggested that higher white absenteeism simply means that those whites who would have scored the lowest among all whites tended to be absent, and that their absence artifically inflated averages of white students. Another explanation, and not necessarily independent or exclusive of the above possibility, would be that absenteeism is a symptom (rather than a basic primary

cause, with outcomes of absenteeism varying, depending on the interaction of distinctive individual and social systems characteristics. Although the findings clearly do show that high attendance does have a positive predictive value for reading achievement for both minority and white students, taken separately and in the composite, the supplemental findings strongly suggest that there are unique factors operating on the white student group which act to differentially cause a higher absenteeism rate among white students. Although likely to cause some emotional reactions in some discussions, it is possible that the whites, now in a clear numerical minority, feel less at ease and accepted in the social context of the school, and as a result absent themselves from the social (if not academic/intellectual context) to a greater extent than their minority student counterparts, and in a way of which does not totally destroy their reading comprehension post-test advantage. Since the issue of improved attendance is of consequence to all students and educational outcomes, an improved school climate which reasonably meets the needs of all students is a present imperative.

Related computations of percent of students in attendance for both the pre and post-reading comprehension post-test were done by student family socio-economic category (using a range defined by lowest category "free," "reduced price," and "full price") and by racial group (minority and white) student groups. In each of the three family income categories, plus a combined total category which includes those students not participating in the school lunch program, there were significantly more minority students present for both the pre and post-test than whites. This trend of a higher attendance rate for minority students applied to all family income level groups.

For both minority and white groups, it was found that as the family income level increased, so did attendance. Table 8 presents more detail.

Insert Table 8 here

The relationship of better attendance to higher family income level suggests that schools need to design offerings to support all students.

Further research and study is needed of these questions and issues relating to consequent educational attainment.

To contrast students at or below the 33rd percentile with students at or above the 67th percentile, the entire set of available 1980-81 grade 1 through 12 from the 1980-81 CTBS Reading Comprehension post-test was used. There were 54,887 CTBS reading comprehension post-test scores; however, not every other variable in the list was available for each individual case containing this reading comprehension score. For instance, the reading vocabulary test was not given in grades one and two, and so the related total of cases with both a reading comprehension and reading vocabulary post-test score was reduced to 44,619.

The total set of 54,887 reading comprehension post-test scores was divided into three groups, based on their CTBS reading comprehension post-test standing with respect to the theoretical/normed grouped:

- Group 1 -- All cases at or below the 33rd percentile (40.7 NCE; 21,736 cases);
- Group 2 -- All cases between the 33rd (40.7 NCE) percentile and the 67th percentile (59.3 NCE); totaling 22,899 cases.
- Group 3 -- All cases at or above the 67th percentile (59.3 NCE: 10,252 cases).

A series of contrasts were made between these comprehension groups with respect to the following variables: a lunch code based poverty indicator; sex; NCE pre, post and gain scores for both reading vocabulary and reading comprehension; student grade levels for 1980-81 and 1981-82; age on December 1, 1981, and race. Ignoring the middle group, the high post-test group of students was contrasted with the low post-test group of students using a series of t-tests, and the $p < .001$ level of confidence. In the order of the magnitude of the absolute t-value, the high comprehension post-test score student group was significantly different from the low post-test score group with respect to the following:

- Obviously, the average reading comprehension post-test score was higher (70.1 NCE vs. 27.6 NCE);
- The average reading vocabulary post-test score was higher (67.0 NCE vs. 33.3 NCE);
- The average reading comprehension pre-test score was higher (63.5 NCE vs. 32.8 NCE);
- The average pre-test reading vocabulary score was higher (64.6 NCE vs. 35.2 NCE);
- The average age was younger (On December 1, 1981, (11.44 years vs. 13.39 years, for a between-group difference of 1.96 years);
- The average reading comprehension NCE gain score from pre to post-test was greater (6.30 NCE vs. -5.02 NCE);
- The average grade level during the 1980-81 post-test year was less (4.69 vs. 6.35 for a between groups difference of 1.67 years);
- The average 1981-82 current year grade level was less(5.29 vs. 6.84; for a between group difference of 1.55; which, together with the average age and post-test grade level differences, suggest that the low post-test group contains more non-promotes, that the effects of low achievement tends to be cumulative, and that those not experiencing academic success tend to drop out of school);

- The poverty rate is lower (6.435 vs. 6.168; with 6 = free, 7 = reduced price and 8 = student paid lunch);
- The proportion of white students is greater (3751 out of 10,252 vs. 4370 out of 21,736; 36.6% vs. 20.1%);
- The proportion of girls is greater;
- The average reading vocabulary gain score is greater (2.5325 NCE vs. -.9327 NCE).

In addition to these t-tests, a series of one-way analysis of variance procedures were done, on each of the dependent variables in the list, using all three comprehension post-test groups (high, middle and low), along with tests of linearity. The inclusion of the middle group did not lead to findings essentially different from the series of t-tests; and from the test of linearity it was found that for each and every dependent variable, the pattern was linear across the independent variable groups. More detailed results can be found in Appendix F.

It might be noted that in these individual-student-data-based supplemental findings, in contrast to the school-wide indices-based findings pertaining to school-wide, racially based reading discrepancy (both in terms of simple comprehension post test scores and in terms of gain scores), significant differences were found for every dependent variable. First, the size of the N cannot be discounted as the cause of this different pattern. The total number of schools of which the indices were based was 39, with the high and low comparison groups being partitioned from that. By comparison, thousands of students were involved in the present analyses. The sheer difference in the size of the sample dramatically affects the ability to more easily achieve greater reliability and statistical significance. However,

these results, along with other considerations, may be suggesting that specific individual but standardized academic achievement is more a function of individual differences and circumstances than it is of school-wide indices, and that this is true to a greater extent for predicting standardized academic achievement than it is for predicting things such as attendance rate, and even course failure and non-promotion.

SUMMARY

It is clear that these analyses have identified some areas of critical differences between high and low discrepant schools as well as high and low achieving students. Some of these factors suggest possible intervention strategies for the schools (such as student attendance). With variables such as poverty rate, a more indirect approach must be taken.

Studies of effective classrooms offer schools positive strategies which they may employ to improve student attendance. Attention to such strategies as developing cooperative learning which has been demonstrated to improve achievement, increasing student involvement in the life of the school, and enhancing student self-esteem appear to be fruitful approaches for schools to consider.

In this study, lunch code rate, which was used to derive school-wide poverty rate, did not vary significantly between high and low discrepancy schools either in terms of post-test scores or gain scores. Nor was the rate significantly different between students who gained seven or more NCE's in their reading comprehension scores. The only place in the present statistical analyses where it became an important variable in predicting reading achievement was in the multiple regression analysis, which approaches the influence of a given variable in an interactive way with the other predictor variables. Poverty rate becomes the second most important variable out of 10 in predicting post-test reading comprehension. In predicting gain score, it is the most important predictor variable out of the same set of 10. The simple correlations between post-test reading comprehension score and family income as indicated by lunch code rate is .412 and between reading comprehension gain score and family income, .460. As has been

stated previously, schools may be required to employ a more indirect approach for offsetting these effects of poverty because--although schools cannot control family income level--they still are obliged to provide appropriate instructional services to their students. As Edmonds (1979) points out, the school is not relieved of its instructional obligations when teaching the children of the poor. Schools may have to modify curricular design, text selection and teaching strategies in order to respond to differences in family background among students in the schools. But that is their mandate.

The study has identified high and low discrepant schools (in terms of the school-wide minority to white gain score disparity) which differ in only one variable studied, namely suspension rate for reasons of disrupting the entire school. Schools which tend to suspend such students may reflect efforts to provide a more orderly climate which in turn should produce higher achievement levels. The analyses also established that students gaining more on reading comprehension tests were younger than those who did not gain. One could conclude that efforts should begin early with students if the widening disparities observed in later grades are to be overcome.

This study utilized a set of broad stroke variables to describe school climate, which upon analysis, suggest that a more complex web of factors is at work in the school, which impact reading and probably other school achievement. As this project continues, other measures of school climate and student descriptors are being gathered and included for further analysis. Staff perceptions are being solicited through a school survey. Student reading history profiles, each with an extensive number of variables, are being collected for a large system-wide random sample of students.

It is evident that schools behave differentially with respect to reading comprehension, race and the interaction between these two factors. The precise reasons and dynamics contributing to these differences are not fully understood at this point. This study does establish that there are real differences. Although the findings indicate that we can predict (although not necessarily control) between 40 and 50 percent of all the variance between reading comprehension post-test scores as well as reading comprehension gain scores, over 50 percent of the potentially explainable variance is not accounted for. As more variables are added to this study, it is anticipated that both the amount of explained variance can be significantly increased and that additional predictor variables can be identified which will suggest specific educational interventions for increasing reading achievement.

Analyses using individual student data showed that the students with higher attendance earned higher test scores, were younger and had a lower poverty rate. More girls than boys were represented in the scores. The direction and magnitude of the results suggest that low attendance students do not grow in their reading skills as well as do the high attendance students. More white students were represented in the low attendance group than minority students. This finding appears contradictory to conclusions in the school analyses. Although it might be concluded that higher white absence could mean that those whites who would have scored lowest among all whites tended to be absent. Although findings clearly do show that high attendance positively predicts higher reading achievement for both minority and

white students, it could be considered that white students may be absenting themselves from various school situations. An improved school climate which reasonably meets the needs of all students is a desirable goal of all students.

The reassignment of students according to the Remedial Court Order has been accomplished in Cleveland. The findings at this point indicate that total elimination of disparity between minority and white students has not yet been fully achieved. This condition suggests that continued impetus toward attainment of equal educational opportunity for all students is imperative.

TABLE 1

SUMMARY OF F VALUES--ALL SOURCES OF VARIATION

1980-81 GRADE LEVEL	AVERAGE POST-TEST READING COMPREHENSION NCE SCORE (N of Cases)			F VALUE (AND SIGNIF. OF F) FOR EACH SOURCE OF VARIATION:						COVARIATE RAW REG. COEFFICIENT
	BLACK STUDENTS	WHITE STUDENTS	COMBINED	COVARIATE: PRE-TEST	MAIN EFFECTS			2-WAY INTER.: RACE, SCHOOL	EX-PLAINED	
					COMBINED	RACE	SCHOOL BLDG.			
1				N.A.						
2				N.A.						
3				N.A.						
4	41.84 (3569)	45.77 (1237)	42.85 (4806)	3462.7 (<.001)	8.641 (<.001)	22.396 (<.001)	8.460 (<.001)	1.223 (.136)	38.574 (<.001)	.641
5	42.40 (3605)	47.60 (1279)	43.76 (4884)	3326.9 (<.001)	7.446 (<.001)	18.272 (<.001)	7.302 (<.001)	1.576 (.006)	37.112 (<.001)	.655
6	44.77 (3320)	50.83 (1313)	46.49 (4633)	3959.0 (<.001)	5.789 (<.001)	73.716 (<.001)	4.480 (<.001)	1.374 (.042)	42.027 (<.001)	.591
7	38.54 (2832)	45.64 (1013)	40.41 (3845)	4017.8 (<.001)	10.193 (<.001)	40.087 (<.001)	8.971 (<.001)	.794 (.749)	84.35 (<.001)	.700
8				N.A.						
9	42.60 (1829)	51.78 (564)	44.76 (2393)	2691.9 (<.001)	7.411 (<.001)	7.543* (<.006)	7.210 (<.001)	2.344 (<.001)	68.915 (<.001)	.730
10	40.15 (1923)	50.14 (592)	42.51 (2515)	3203.9 (<.001)	6.471 (<.001)	10.009* (.002)	5.918 (<.001)	1.224 (.255)	118.2 (<.001)	.770
11	37.66 (1449)	46.48 (522)	40.00 (1971)	2715.5 (<.001)	4.306 (<.001)	1.117* (.291)	4.500 (<.001)	.684 (.803)	87.331 (<.001)	.787
12				N.A.						
ALL GRADES (4-7 & 9-11)	41.74 (19,599)	48.18 (6537)	43.35 (26,136)	>9999 (<.001)	16.085 (<.001)	150.783 (<.001)	14.626 (<.001)	1.610 (<.001)	129.112 (<.001)	.668

Note: Unlike 1980-81 grades 4 through 7, for which the CTBS Reading pre-test was given in May of 1980; the pre-tests for grades 9, 10, and 11 were given on March 16, 1981, December 1, 1980 and January 26, 1981, respectively; and post-tests on May 25, 18, and 25, 1981, respectively.

TABLE 2

SUMMARY OF COMBINED, MINORITY AND WHITE COMPREHENSION AVERAGE POST-TEST NCE SCORES AND DISCREPANCY BETWEEN NCE AVERAGES

1980-81 GRADE LEVEL	COMBINED 1980-81 CTBS READING COMPREHENSION AVERAGE POST-TEST NCE (ONE YEAR CHANGE)	MINORITY READING COMPREHENSION AVERAGE POST-TEST NCE (ONE YEAR CHANGE)	WHITE READING COMPREHENSION AVERAGE POST-TEST NCE (ONE YEAR CHANGE)	DISCREPANCY BETWEEN NCE AVERAGES: AVERAGE MINORITY NCE MINUS AVERAGE WHITE NCE (ONE YEAR CHANGE)
1	52.9	52.8	53.2	- .4
2	50.1 (-2.8)	50.1 (-2.7)	50.1 (-3.1)	.0 (+ .4)
3	47.0 (-3.1)	46.1 (-4.0)	49.7 (- .4)	-3.6 (-3.6)
4	42.1 (-4.9)	41.1 (-5.0)	45.1 (-4.6)	-4.0 (- .4)
5	43.3 (+1.2)	42.0 (+ .9)	47.2 (+2.1)	-5.2 (-1.2)
6	46.0 (+2.7)	44.3 (+2.3)	50.4 (+3.2)	-6.1 (- .9)
7	39.8 (-6.2)	37.9 (-6.4)	45.3 (-5.1)	-7.4 (-1.3)
8	40.8 (+1.0)	39.1 (+1.2)	46.8 (+1.5)	-7.7 (- .3)
9	44.5 (+3.7)	42.4 (+3.3)	51.0 (+4.2)	-7.6 (+ .1)
10	41.2 (-3.3)	39.0 (-3.4)	48.6 (-2.4)	-9.6 (-2.0)
11	39.3 (-1.9)	37.0 (-2.0)	45.9 (-2.7)	-8.9 (+ .7)
12	40.8 (+1.5)	37.4 (+ .4)	48.8 (+2.8)	-11.4 (-2.5)
COMBINED	44.6			

TABLE 3

POST-TEST CTBS READING COMPREHENSION AVERAGE NCE SCORE: ALL GRADES SPRING 1981

CRITERION VARIABLE TZNCE = POST TEST (SPRING, 1981) CTBS READING COMPREHENSION NCE SCORE

ANALYSIS OF VARIANCE

VARIABLE	CODE	VALUE LABEL	SUM	MEAN	STD DEV	SUM OF SQ	N
TGRADE	1		307225.0000	52.9151	17.3900	1755493.1383	(5806)
TGRADE	2		265788.0000	50.0542	16.7459	1488776.3797	(5310)
TGRADE	3		273964.0000	47.0002	16.7478	1634682.9998	(5829)
TGRADE	4		250146.0000	42.1405	17.4911	1815740.8241	(5936)
TGRADE	5		249057.0000	43.3444	18.0952	1881113.4057	(5746)
TGRADE	6		244340.0000	45.9804	15.9432	1350485.9646	(5314)
TGRADE	7		184761.0000	39.7592	16.2798	1231343.5442	(4647)
TGRADE	8		163947.0000	40.8133	15.7868	1000877.9701	(4017)
TGRADE	9		146041.0000	44.4976	17.5874	1014862.4805	(3282)
TGRADE	10		133591.0000	41.1683	17.8051	1028422.1307	(3245)
TGRADE	11		98371.0000	39.2542	17.9548	807549.0810	(2506)
TGRADE	12		132620.0000	40.8187	18.1391	1068676.2222	(3249)
		WITHIN GROUPS TOTAL	2449851.0000	44.6344	17.1171	16078034.1410	(54887)

ANALYSIS OF VARIANCE

SOURCE	SUM OF SQUARES	D.F.	MEAN SQUARE	F	SIG.
BETWEEN GROUPS	970819.443	11	88256.313	301.222	0.0
LINEARITY	614941.623	1	614941.623	2098.821	0.0000
DEV. FROM LINEARITY	355877.820	10	35587.782	121.463	0.0
	R =-0.1899	R SQUARED = 0.0361			
WITHIN GROUPS	16078034.141	54875	292.994		
	ETA = 0.2386	ETA SQUARED = 0.0569			

TABLE 4

SUMMARY OF CTBS TOTAL MINORITY AND WHITE COMPREHENSION AVERAGE NCE GAIN SCORES AND DISCREPANCY BETWEEN NCE AVERAGES

1980-81 GRADE LEVEL	TOTAL 1980-81 CTBS READING COMPREHENSION NCE GAIN SCORE (POST-PRE)	MINORITY AVERAGE READING COMPREHENSION NCE GAIN SCORE (POST-PRE)	WHITE AVERAGE READING COMPREHENSION NCE GAIN SCORE (POST-PRE)	DISCREPANCY BETWEEN NCE AVERAGES: AVERAGE MINORITY NCE GAIN SCORE AVERAGE WHITE GAIN
1	N.A.			
2	N.A.			
3	N.A.			
4	-3.12	-3.25	-2.70	- .55
5	+1.27 (+4.39)	+1.32 (+4.57)	+1.10 (+3.80)	.22 (+ .77)
6	+3.12 (+1.85)	+2.85 (+1.53)	+3.84 (+2.74)	- .99 (-1.21)
7	-5.44 (-8.56)	-5.56 (-8.41)	-5.06 (-8.90)	- .50 (+ .44)
8	N.A.			
9	+2.13	+2.39	+1.28	+1.11
10	+2.16 (+ .03)	+2.30 (- .09)	+1.68 (+ .40)	+ .62 (- .49)
11	+1.11 (-1.05)	+1.51 (- .79)	- .04 (-1.72)	+1.55 (+1.13)
12	N.A.			
COMBINED TOTAL	- .08			

TABLE 5

SUMMARY OF MULTIPLE REGRESSION RESULTS--FULL PREDICTOR VARIABLES GROUP

* MULTIPLE REGRESSION * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 1

DEPENDENT VARIABLE.. T2NCEALL: Average Spring, 1980-81 CTBS Reading Comprehension post-test score for school.

SUMMARY TABLE

VARIABLE	MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
PFTOTAL	0.58089	0.33743	0.33743	-0.58089	-0.8029073D-01	-0.13608
POVRATE	0.64385	0.41454	0.07711	-0.41205	-0.1143708	-0.32940
PWHITES	0.65690	0.43152	0.01698	0.34418	0.1200477	0.25659
PADA	0.66699	0.44487	0.01335	0.51324	0.2109631	0.28994
PSUSP5	0.67880	0.46077	0.01590	-0.24002	-0.1429051	-0.31610
PSUSR2	0.69213	0.47904	0.01828	-0.04776	0.1159834	0.24241
PSUSR4	0.69585	0.48427	0.00522	-0.28373	0.3469319D-01	0.07698
PSUSR3	0.69825	0.48755	0.00328	-0.10504	-0.3072591D-01	-0.06731
PTEACHAB	0.69912	0.48876	0.00121	-0.19710	0.2076939	0.05271
PSUSR1	0.69947	0.48926	0.00050	-0.06255	0.1280427D-01	0.02834
(CONSTANT)					30.77932	

PFTOTAL = Percent of F grades given in the school during 1980-81.

POVRATE = Poverty rate in school (percent receiving free lunch) during 1980-81.

PWHITES = Percent of school's student population that is white during 1980-81.

PADA = Percent of average daily membership represented by average daily attendance (average percent of enrolled students in actual attendance; i.e., attendance rate) during 1980-81.

PSUSP5 = Ratio of 1980-81 suspensions for "disruption of entire school" to school's average daily membership, expressed in percent.

PSUSR2 = Ratio of 1980-81 suspensions for "fighting, hitting and pushing" to school's average daily membership, expressed in percent.

PSUSR4 = Ratio of 1980-81 suspensions for "failure to attend school/classes on time" to school's average daily membership, expressed in percent.

PSUSR3 = Ratio of 1980-81 suspensions for "failure to attend all assigned classes" to school's average daily membership.

PTEACHAB = Teacher absenteeism rate for 1980-81; average percent of teacher's absent.

PSUSR1 = Ratio of 1980-81 suspensions for "failure to comply" to school's average daily membership, expressed in percent.

TABLE 6

SUMMARY OF MULTIPLE REGRESSION RESULTS--REDUCED PREDICTOR VARIABLES GROUP

* MULTIPLE REGRESSION * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 1

DEPENDENT VARIABLE.. T2NCEALL : Average Spring, 1980-81 CTBS READING COMPREHENSION post-test score for school

SUMMARY TABLE

VARIABLE	MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
PADA	0.51324	0.26342	0.26342	0.51324	0.3041618	0.41803
POVRATE	0.61495	0.37817	0.11475	-0.41205	-0.1042041	-0.30010
PWHITES	0.66331	0.43997	0.06181	0.34418	0.1243411	0.26577
PTOTSUS	0.66482	0.44198	0.00201	-0.23502	-0.69961260-02	-0.05236
(CONSTANT)					21.46738	

PADA = Attendance rate: 1980-81 ratio of average daily attendance to average daily membership, expressed in percent.

POVRATE = Poverty rate: 1980-81 percent of enrolled students receiving free lunch in the school.

PWHITES = Percent of school's student population that was white during 1980-81.

PTOTSUS = Suspension Rate: Ratio of total 1980-81 suspensions in the school (for all reasons) to the school's average daily membership, expressed in percent

TABLE 7

SUMMARY OF MULTIPLE REGRESSION RESULTS--PREDICTOR VARIABLE GROUP FOR NCE GAIN SCORES

MULTIPLE REGRESSION — VARIABLE LIST 1, REGRESSION LIST 1

DEPENDENT VARIABLE.. BZNCEALL: Average 1980-81 CTBS Reading Comprehension gain (post minus pre) score for school

SUMMARY TABLE

VARIABLE	MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
POVRATE	0.45993	0.21154	0.21154	-0.45993	-0.90366470-01	-0.43525
PADA	0.53583	0.28711	0.07557	-0.20264	-0.10619890	-0.22415
PSUSR4	0.56123	0.31783	0.03072	-0.20657	-0.76986960-01	-0.26245
PSUSR1	0.61031	0.37247	0.03464	0.13444	0.84957490-01	0.28890
PSUSP5	0.64007	0.40962	0.03715	-0.38192	-0.11175732	-0.39958
PSUSR2	0.65800	0.43297	0.02335	-0.28855	0.79815540-01	0.29630
PFTOTAL	0.66296	0.43952	0.00655	0.12856	0.69559440-01	0.10113
PTEACHAB	0.66426	0.44117	0.00164	-0.07681	0.1326714	0.05181
PSUSR3	0.66457	0.44165	0.00049	0.20088	0.74631940-02	0.02505
(CONSTANT)					10.99545	

POVRATE = Schools 1980-81 poverty rate (percent of students receiving free lunch).

PADA = Average attendance rate for school during 1980-81: Ratio of average daily attendance to average daily membership, expressed in percent

PSUSR4 = School's 1980-81 suspension rate for "failure to attend school/classes on time": ratio of total suspensions (for reason 4) to average daily membership, expressed in percent.

PSUSR1 = School's 1980-81 suspension rate for "failure to comply": ratio of total suspension (for reason 1) to average daily membership, expressed in percent.

PSUSP5 = School's 1980-81 suspension rate for "disruption of entire school": ratio of total suspension (for reason 5) to average daily membership, expressed in percent.

PSUSR2 = School's 1980-81 suspension rate for "fighting, hitting and pushing": ratio of total suspension (for season 2) to average daily membership, expressed in percent.

PFTOTAL = School's 1980-81 failure rate: Percent of all 1980-81 grades given in school which were F.

PTEACHAB = School's 1980-81 teacher absence rate: average daily percent of teachers-in school who were absent.

PUSUR3 = School's 1980-81 suspension rate: for "failure to attend all assigned classes": ratio of total suspensions (for reason 3) to average daily membership, expressed in percent.

TABLE 8

PERCENT OF THOSE 1980-81 POST-TEST TAKING STUDENTS WHO WERE ALSO PRESENT AT THE PRIOR 1979-80 TESTING, BY RACE AND LUNCH CODE GROUPS (GRADES 4,5,6,7 and 9,10,11)

	ALL MINORITY STUDENTS	WHITE STUDENTS
FREE LUNCH (LOWEST SES)	71.7 (14,999/20,910)	63.3 (3396/5362)
REDUCED PRICE LUNCH	79.0 (1442/1825)	70.3 (766/1089)
STUDENT PAID LUNCH (HIGHER SES)	85.5 (1324/1549)	75.6 (904/1196)
COMBINED TOTAL (INCLUDING THOSE NOT GETTING SCHOOL LUNCH)	71.0 (19,856/27,952)	64.4 (6,649/10,331)

FIGURE 1

1980-81 CTBS READING COMPREHENSION NCE SCORES
(CAUTION: THIS IS CROSS-SECTION DATA; DATA AT EACH GRADE LEVEL REPRESENTS A UNIQUE/DIFFERENT SET OF STUDENTS)

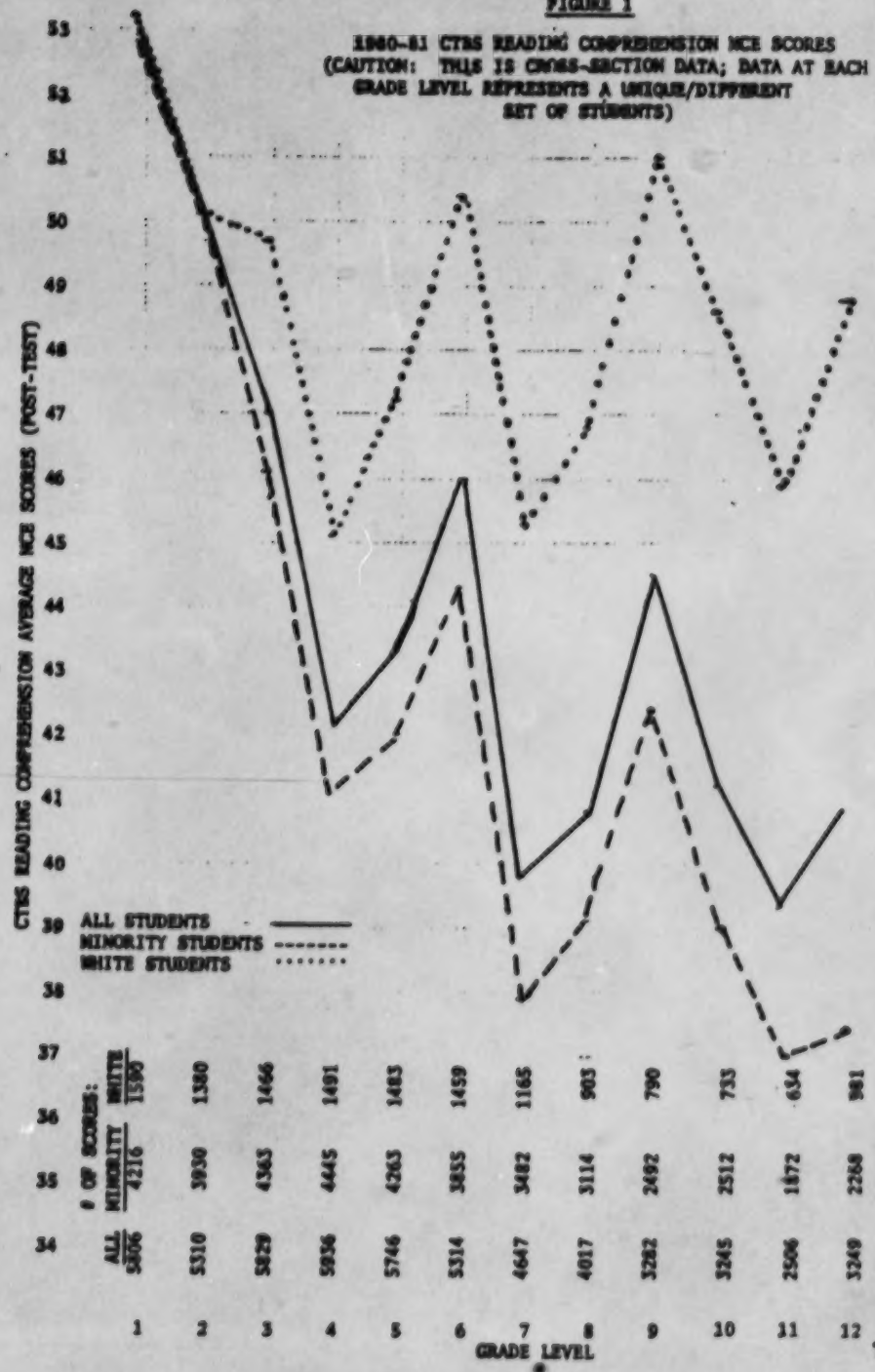
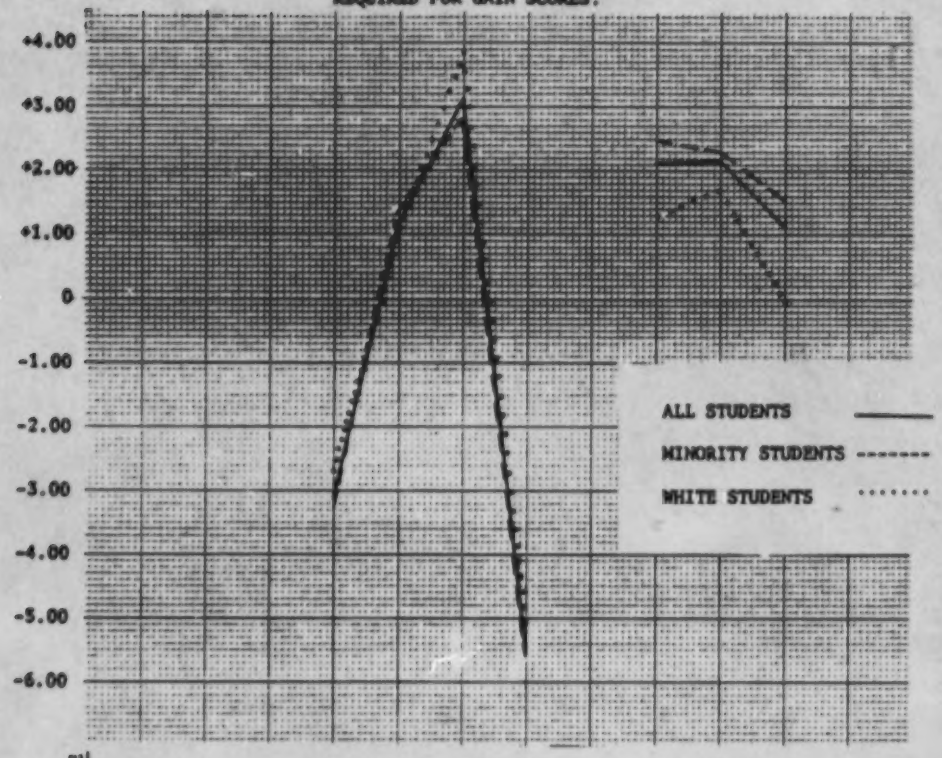


FIGURE 2

1980-81 CTBS READING COMPREHENSION NCE GAIN (POST-PRE) SCORES

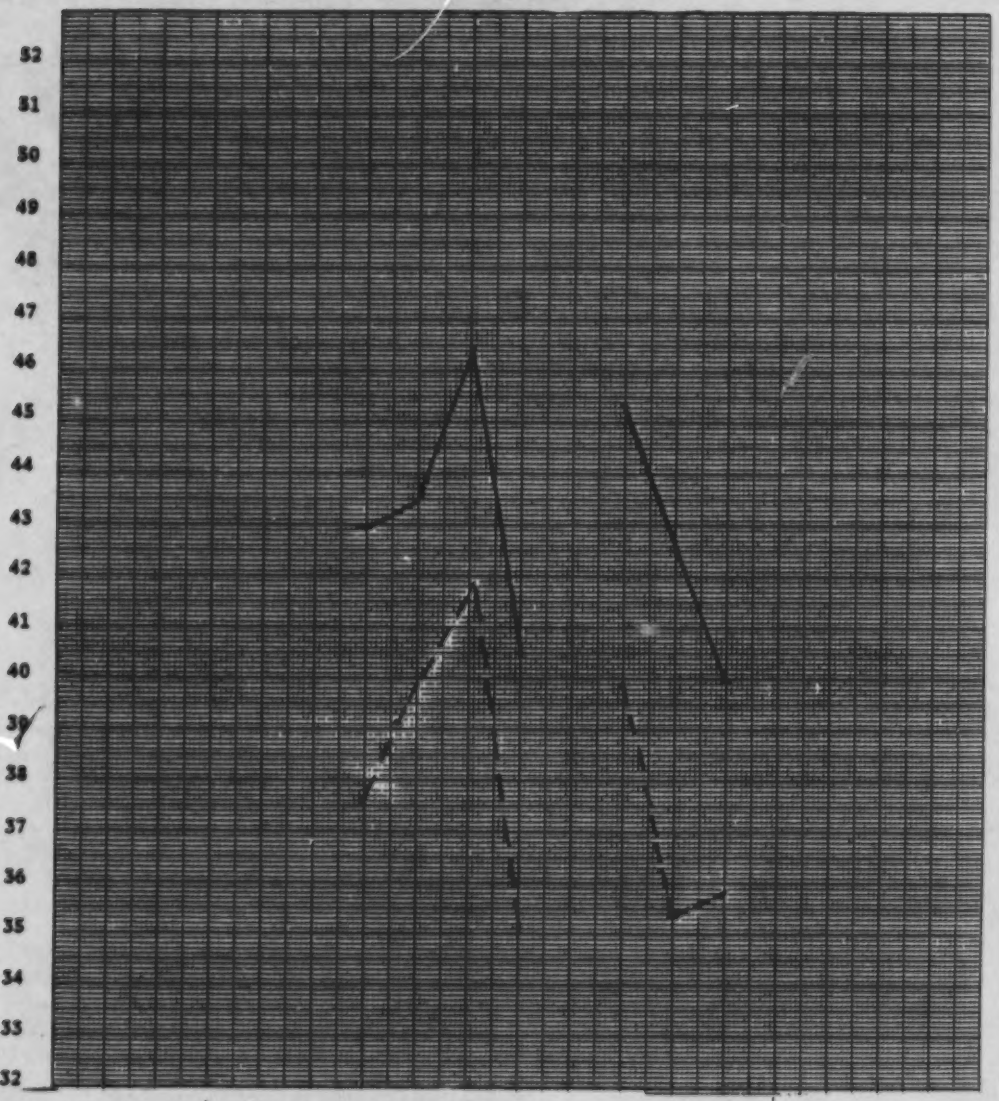
NOTE: THIS IS CROSS SECTION DATA; DATA AT EACH GRADE LEVEL REPRESENTS A DIFFERENT SET OF STUDENTS. GRADES 1, 2, 3, 8 & 12 DO NOT HAVE PRE-TEST SCORES REQUIRED FOR GAIN SCORES.



NUMBER OF SCORES:	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL
WHITE				1260	1306	1313	1013		643	592	522		
MINORITY				3813	3861	3498	2993		2144	2036	1511		
ALL				5073	5167	4811	4006		2787	2628	2033		26505

FIGURE 3

A COMPARISON OF POST-TEST ONLY STUDENTS WITH
POST- PLUS PRE-TEST STUDENTS BY GRADE LEVEL USING 1980-81
POST-TEST CTBS COMPREHENSION NCE SCORES: ALL STUDENTS



	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL (X)
GRADE LEVEL													
NO. OF SCORES: POST ONLY				863	579	503	641		495	617	473		4171 (37.7)
PRE & POST				5073	5167	4811	4006		2787	2628	2033		26505 (43.3)

POST PLUS PRE-TEST STUDENTS ————
POST-TEST ONLY STUDENTS - - - - - - - - - -

FIGURE 4

A COMPARISON OF POST-TEST ONLY STUDENTS WITH
POST- PLUS PRE-TEST STUDENTS BY GRADE LEVEL USING 1980-81
POST-TEST CTBS READING COMPREHENSION NCE SCORES: MINORITY STUDENTS

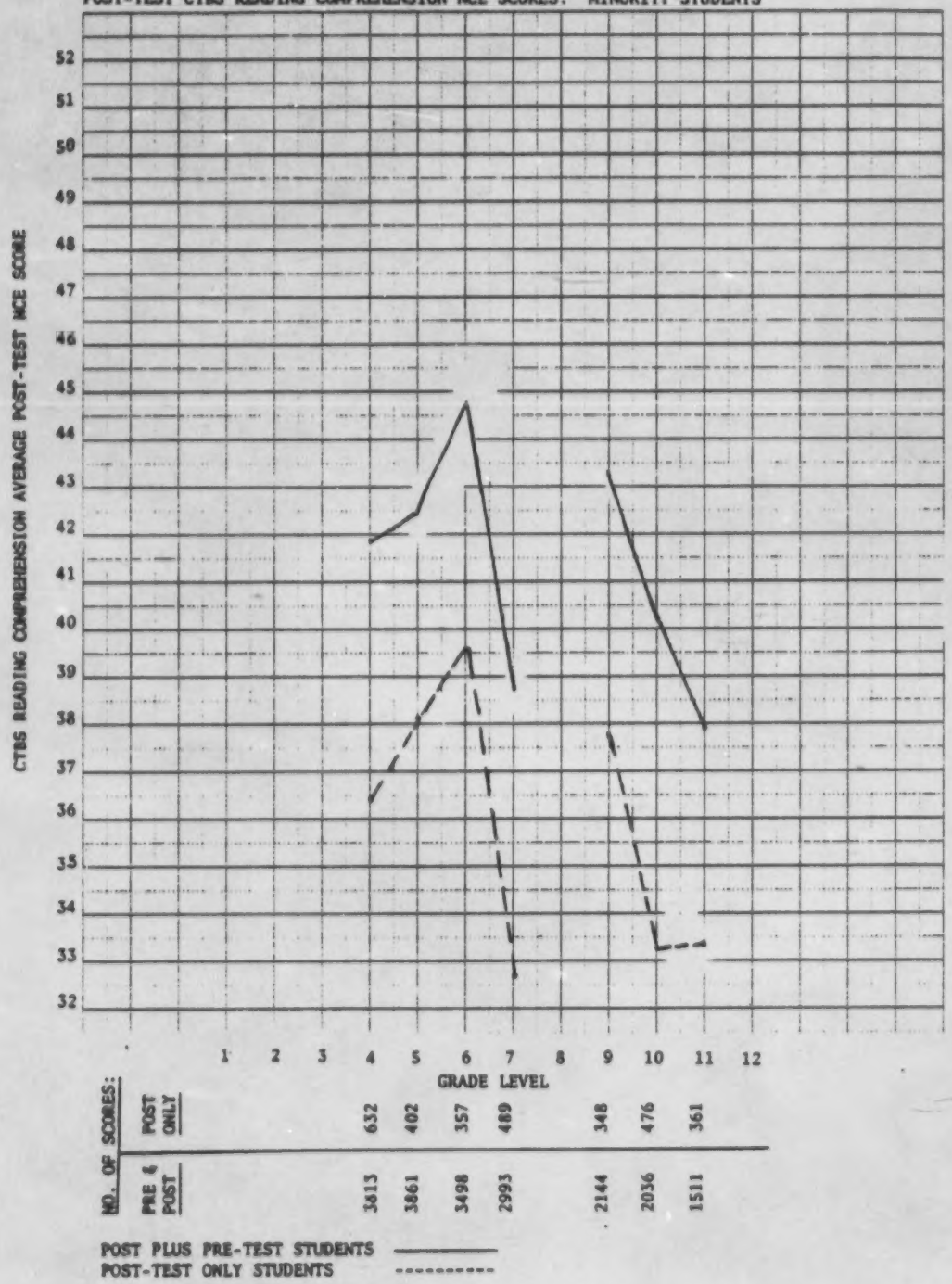
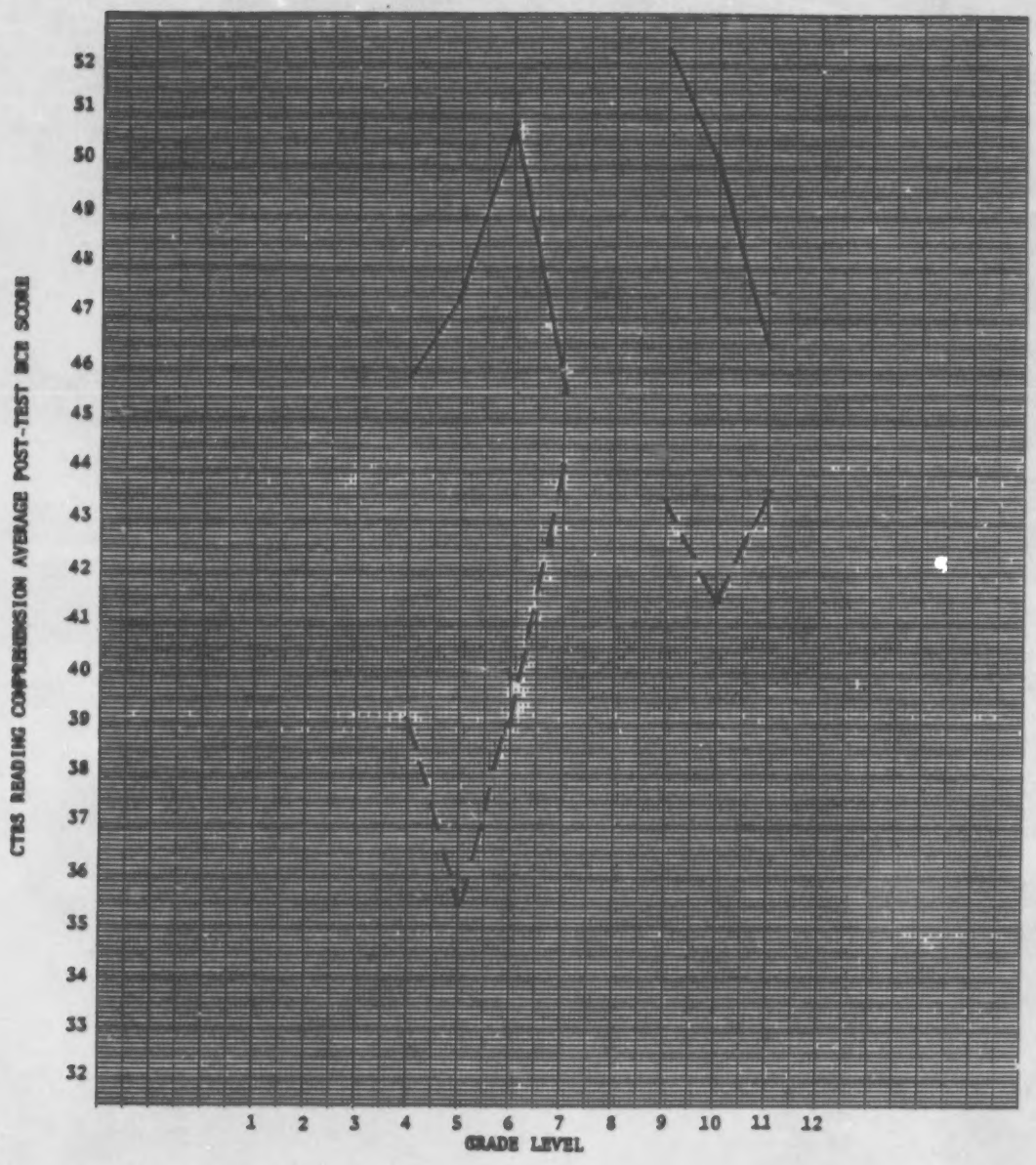


FIGURE 5

A COMPARISON OF POST-TEST ONLY STUDENTS WITH
POST- PLUS PRE-TEST STUDENTS BY GRADE LEVEL USING 1980-81
POST-TEST CTBS READING COMPREHENSION NCE SCORES: WHITE STUDENTS



NO. OF SCORES:	1	2	3	4	5	6	7	8	9	10	11	12
POST ONLY				201	222	472	746		369	312	251	
PRE & POST				1260	1306	1313	1013		643	592	522	

POST PLUS PRE-TEST STUDENTS ————
POST-TEST ONLY STUDENTS ----------

APPENDIX A

SUMMARY OF T-TESTS BETWEEN HIGH AND LOW DISCREPANT SCHOOLS IN TERMS OF AVERAGE READING COMPREHENSION POST-TEST SCORES

- T - T E S T -

GROUP 1 - T2SCHGRP EQ 1. Top 25% of schools: in terms of average Reading Comp. Post-Test Scores Being Least Discrepant
GROUP 2 - T2SCHGRP EQ 3. Bottom 25% of schools

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	F VALUE	2-TAIL PROB.	POOLED VARIANCE ESTIMATE T VALUE	DEGREES OF FREEDOM	2-TAIL PROB.	SEPARATE VARIANCE ESTIMATE T VALUE	DEGREES OF FREEDOM	2-TAIL PROB.
POVRATE												
GROUP 1 (Top 25%)	10	67.1000	12.393	3.919	1.05	0.941	-0.45	18	0.658	-0.45	17.99	0.658
GROUP 2 (Bottom 25%)	10	62.6300	12.712	4.020								
T2NCEALL												
GROUP 1	10	38.5347	2.514	0.795	2.73	0.150	-1.18	18	0.255	-1.16	14.81	0.258
GROUP 2	10	40.3393	4.155	1.314								
T2NCEMIN												
GROUP 1	10	37.7570	2.939	0.929	1.09	0.901	0.10	18	0.918	0.10	17.97	0.918
GROUP 2	10	37.6225	2.816	0.891								
T2NCEWHT												
GROUP 1	10	41.7759	3.009	0.950	1.66	0.462	-4.78	18	0.000	-4.78	16.96	0.000
GROUP 2	10	49.1815	3.871	1.224								
D2NCEALL												
GROUP 1	9	-0.9960	2.839	0.946	3.14	0.122	-0.52	17	0.609	-0.54	14.47	0.600
GROUP 2	10	-0.0029	5.026	1.589								
D2NCEMIN												
GROUP 1	9	-0.4791	2.758	0.919	3.23	0.114	-0.23	17	0.819	-0.24	14.35	0.815
GROUP 2	10	-0.0456	4.953	1.566								
D2NCEWHT												
GROUP 1	9	-2.6799	3.955	1.318	1.70	0.467	-1.39	17	0.184	-1.41	16.62	0.178
GROUP 2	10	0.2684	5.155	1.630								

- T - T E S T -

GROUP 1 - T2SCHGRP EQ 1. Top 25% of schools (Least Discrepant)
GROUP 2 - T2SCHGRP EQ 3. Botton 25% of schools

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	POOLED VARIANCE ESTIMATE F VALUE	POOLED VARIANCE ESTIMATE 2-TAIL PROB.	POOLED VARIANCE ESTIMATE T VALUE	POOLED VARIANCE ESTIMATE DEGREES OF FREEDOM	POOLED VARIANCE ESTIMATE 2-TAIL PROB.	SEPARATE VARIANCE ESTIMATE T VALUE	SEPARATE VARIANCE ESTIMATE DEGREES OF FREEDOM	SEPARATE VARIANCE ESTIMATE 2-TAIL PROB.
PADA												
GROUP 1 (Top 25%)	10	78.0714	6.961	2.201	1.01	0.987	0.91	18	0.374	0.91	18.00	0.374
GROUP 2 (Bottom 25%)	10	75.2233	7.000	2.214								
PTOTSUS												
GROUP 1	10	63.3890	38.331	12.121	1.03	0.961	-1.04	18	0.313	-1.04	18.00	0.313
GROUP 2	10	81.3301	38.973	12.324								
PSUSR1												
GROUP 1	10	9.4117	5.655	1.788	5.97	0.014	-1.59	18	0.128	-1.59	11.93	0.137
GROUP 2	10	16.9349	13.812	4.368								
PSUSR2												
GROUP 1	10	13.6284	11.298	3.573	2.15	0.270	0.10	18	0.919	0.10	15.88	0.919
GROUP 2	10	13.1825	7.705	2.437								
PSUSR3												
GROUP 1	10	10.0094	6.790	2.147	2.40	0.208	-1.07	18	0.300	-1.07	15.39	0.303
GROUP 2	10	14.2333	10.518	3.326								
PSUSR4												
GROUP 1	10	6.6923	12.088	3.823	1.64	0.472	-0.69	18	0.497	-0.69	17.00	0.498
GROUP 2	10	10.0523	9.436	2.984								
PSUSP5												
GROUP 1	10	17.9719	11.600	3.668	1.84	0.377	-0.58	18	0.567	-0.58	16.55	0.568
GROUP 2	10	20.6278	8.550	2.704								

APPENDIX A (Cont'd)

T-TEST

GROUP 1 - T2SCHGRP EQ 1. Top 25% of schools (Least Discrepant)
GROUP 2 - T2SCHGRP EQ 3. Bottom 25% of schools

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	F VALUE	2-TAIL PROB.	POOLED VARIANCE ESTIMATE T VALUE	DEGREES OF FREEDOM	2-TAIL PROB.	SEPARATE VARIANCE ESTIMATE T VALUE	DEGREES OF FREEDOM	2-TAIL PROB.
PTOTCP												
GROUP 1	6	32.2415	23.046	9.409								
GROUP 2	8	16.5864	19.673	6.955	1.37	0.678	1.37	12	0.195	1.34	9.86	0.211
PAMERNAT												
GROUP 1	10	0.2272	0.213	0.067								
GROUP 2	10	0.2706	0.165	0.052	1.67	0.456	0.08	18	0.939	0.08	16.93	0.939
PWHITES												
GROUP 1	10	26.4508	9.227	2.918								
GROUP 2	10	27.4944	14.278	4.515	2.39	0.209	-0.19	18	0.848	-0.19	15.40	0.849
PBLACKS												
GROUP 1	10	74.7397	19.275	6.514								
GROUP 2	10	67.7082	14.729	4.658	1.06	0.927	1.08	18	0.293	1.08	17.98	0.293
PASIANS												
GROUP 1	10	0.7154	1.877	0.593								
GROUP 2	10	0.3823	0.376	0.119	24.94	0.000	0.55	18	0.589	0.55	9.72	0.594
PHISPAN												
GROUP 1	10	2.6498	1.767	0.559								
GROUP 2	10	1.7813	2.354	0.744	1.77	0.406	0.93	18	0.363	0.93	16.70	0.364
RBNPP RATIO OF BLACK NONPROMOTIES TO PROMOTIES												
GROUP 1	10	0.1701	0.090	0.029								
GROUP 2	10	0.2564	0.268	0.085	8.81	0.003	-0.97	18	0.347	-0.97	11.02	0.355

T - T E S T

GROUP 1 - T2SCHGRP EQ 1. Top 25% of Schools (Least Discrepant)
GROUP 2 - T2SCHGRP EQ 3. Bottom 25% of Schools

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	POOLED VARIANCE ESTIMATE F VALUE	POOLED VARIANCE ESTIMATE 2-TAIL PROB.	POOLED VARIANCE ESTIMATE T VALUE	POOLED VARIANCE ESTIMATE DEGREES OF FREEDOM	POOLED VARIANCE ESTIMATE 2-TAIL PROB.	SEPARATE VARIANCE ESTIMATE T VALUE	SEPARATE VARIANCE ESTIMATE DEGREES OF FREEDOM	SEPARATE VARIANCE ESTIMATE 2-TAIL PROB.
RONPP RATIO OF NONBLK NONPROMOTES TO PROMOTES												
GROUP 1	10	0.2792	0.227	0.072								
					3.80	0.060	-0.66	18	0.519	-0.66	13.43	0.523
GROUP 2	10	0.3624	0.442	0.140								
PTOTNP PERCENT OF TOTAL THAT ARE NONPROMOTES												
GROUP 1	10	15.2193	6.748	2.134								
					4.63	0.032	-0.61	18	0.548	-0.61	12.72	0.551
GROUP 2	10	18.3205	14.517	4.591								
PAGEADV PERCENT OF TOTAL THAT ARE AGE ADVANCMNTS												
GROUP 1	10	2.0753	3.068	0.970								
					20.34	0.000	1.58	18	0.132	1.58	9.88	0.146
GROUP 2	10	0.5064	0.680	0.215								
PATOTAL												
GROUP 1	10	11.3019	1.289	0.407								
					11.22	0.001	-0.38	18	0.705	-0.38	10.59	0.708
GROUP 2	10	11.8502	4.315	1.365								
PBTOTAL												
GROUP 1	10	15.8472	2.977	0.941								
					2.31	0.228	0.18	18	0.856	0.18	15.56	0.856
GROUP 2	10	15.5312	4.524	1.431								
PCTOTAL												
GROUP 1	10	20.4572	4.141	1.309								
					2.06	0.296	1.06	18	0.305	1.06	16.07	0.306
GROUP 2	10	18.7711	2.883	0.912								
PDTOTAL												
GROUP 1	10	19.6372	3.604	1.140								
					2.39	0.211	1.13	18	0.274	1.13	15.41	0.277
GROUP 2	10	18.1072	2.332	0.738								

T-TEST

GROUP 1 - T2SCHGRP EQ 1. Top 25% of Schools (Least Discrepant)
GROUP 2 - T2SCHGRP EQ 3. Bottom 25% of Schools

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	POOLED VARIANCE ESTIMATE F VALUE	POOLED VARIANCE ESTIMATE 2-TAIL PROB.	POOLED VARIANCE ESTIMATE T VALUE	POOLED VARIANCE ESTIMATE DEGREES OF FREEDOM	POOLED VARIANCE ESTIMATE 2-TAIL PROB.	SEPARATE VARIANCE ESTIMATE T VALUE	SEPARATE VARIANCE ESTIMATE DEGREES OF FREEDOM	SEPARATE VARIANCE ESTIMATE 2-TAIL PROB.
PF1CTAL												
GROUP 1	10	26.0717	9.928	3.140	1.12	0.871	-0.82	18	0.423	-0.82	17.94	0.423
GROUP 2	10	29.6157	9.391	2.970								
POTOTAL												
GROUP 1	10	6.6846	3.082	0.975	1.32	0.689	0.43	18	0.670	0.43	17.67	0.670
GROUP 2	10	6.1246	2.686	0.849								
PF7ENGL												
GROUP 1	6	25.4978	12.886	5.261	1.55	0.641	-0.10	10	0.925	-0.10	9.55	0.925
GROUP 2	6	26.1462	10.341	4.222								
PF8ENGL												
GROUP 1	6	23.6141	7.703	3.145	1.37	0.737	-0.26	10	0.800	-0.26	9.76	0.800
GROUP 2	6	24.8732	9.025	3.684								
PF9ENGL												
GROUP 1	7	31.6423	14.519	5.489	110.26	0.000	0.19	10	0.854	0.23	6.15	0.826
GROUP 2	5	30.5579	1.421	0.635								
PF10ENGL												
GROUP 1	2	39.1501	4.179	2.955	17.09	0.351	-0.09	4	0.935	-0.12	3.60	0.908
GROUP 2	4	40.2773	17.277	8.638								
PF11ENGL												
GROUP 1	4	27.3788	9.034	4.517	5.01	0.219	-0.34	6	0.748	-0.34	4.15	0.753
GROUP 2	4	31.1058	20.216	10.108								

T - T E S T

GROUP 1 - T2SCHGRP EQ 1. Top 25% of Schools (Least Discrepant)
GROUP 2 - T2SCHGRP EQ 3. Bottom 25% of Schools

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	POOLED VARIANCE ESTIMATE F VALUE	F 2-TAIL PROB.	POOLED VARIANCE ESTIMATE T VALUE	T DEGREES OF FREEDOM	T 2-TAIL PROB.	SEPARATE VARIANCE ESTIMATE T VALUE	SEPARATE VARIANCE ESTIMATE DEGREES OF FREEDOM	SEPARATE VARIANCE ESTIMATE 2-TAIL PROB.
PF12ENGL												
GROUP 1	4	14.0426	5.173	2.586	6.46	0.160	-0.85	6	0.428	-0.85	3.91	0.444
GROUP 2	4	20.0436	13.151	6.575								
PF7MATH												
GROUP 1	6	30.4885	15.140	6.181	1.07	0.945	-1.22	10	0.249	-1.22	9.99	0.249
GROUP 2	6	41.6118	14.653	5.982								
PF8MATH												
GROUP 1	6	36.7713	11.432	4.667	2.26	0.391	0.19	10	0.855	0.19	8.70	0.855
GROUP 2	6	35.7181	7.599	3.102								
PF9MATH												
GROUP 1	7	32.3784	17.049	6.671	1.94	0.543	-0.63	10	0.544	-0.67	9.98	0.521
GROUP 2	5	38.2046	12.673	5.667								
PF10MATH												
GROUP 1	2	42.0240	14.772	10.445	1.63	0.582	-0.47	4	0.660	-0.43	1.65	0.710
GROUP 2	4	47.1373	11.558	5.779								
PF11MATH												
GROUP 1	4	22.7039	8.569	4.285	1.50	0.746	-0.57	6	0.590	-0.57	5.77	0.590
GROUP 2	4	25.8486	6.988	3.494								
PF12MATH												
GROUP 1	4	17.3033	10.879	5.440	1.34	0.817	-0.59	6	0.574	-0.59	5.88	0.574
GROUP 2	4	22.2414	12.578	6.289								

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T - T E S T

GROUP 1 - T2SCHGRP EQ 1. Top 25% of Schools (Least Discrepant)
GROUP 2 - T2SCHGRP EQ 3. Bottom 25% of Schools

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	POOLED VARIANCE ESTIMATE F VALUE	POOLED VARIANCE ESTIMATE 2-TAIL PROB.	POOLED VARIANCE ESTIMATE T VALUE	POOLED VARIANCE ESTIMATE DEGREES OF FREEDOM	POOLED VARIANCE ESTIMATE 2-TAIL PROB.	SEPARATE VARIANCE ESTIMATE T VALUE	SEPARATE VARIANCE ESTIMATE DEGREES OF FREEDOM	SEPARATE VARIANCE ESTIMATE 2-TAIL PROB.
PF7SCI												
GROUP 1	6	27.2122	14.773	6.031	3.83	0.167	-0.98	10	0.350	-0.98	7.45	0.360
GROUP 2	6	33.8463	7.553	3.083								
PF8SCI												
GROUP 1	6	29.9129	12.661	5.259	1.32	0.767	-0.24	10	0.818	-0.24	9.81	0.818
GROUP 2	6	31.5572	11.203	4.573								
PF9SCI												
GROUP 1	7	24.7969	15.147	5.725	10.12	0.042	-1.00	10	0.340	-1.16	7.56	0.278
GROUP 2	5	31.9079	4.761	2.129								
PF10SCI												
GROUP 1	2	43.5134	8.504	6.013	3.76	0.717	-0.01	4	0.991	-0.02	3.81	0.988
GROUP 2	4	43.6758	16.494	8.247								
PF11SCI												
GROUP 1	4	19.4792	8.715	4.357	1.98	0.589	-0.90	6	0.402	-0.90	5.41	0.409
GROUP 2	4	26.2550	12.262	6.131								
PF12SCI												
GROUP 1	3	18.4192	17.395	10.043	1.77	0.623	0.28	5	0.789	0.27	3.62	0.801
GROUP 2	4	15.1946	13.090	6.545								
PF7SS												
GROUP 1	6	29.8716	7.656	3.126	1.18	0.858	-1.77	10	0.108	-1.77	9.93	0.108
GROUP 2	6	32.3712	7.037	2.873								

- T - T E S T -

GROUP 1 - T2SCHGRP EQ 1. Top 25% of Schools (Least Discrepant)
GROUP 2 - T2SCHGRP EQ 3. Bottom 25% of Schools

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	POOLED VARIANCE ESTIMATE F VALUE	POOLED VARIANCE ESTIMATE 2-TAIL PROB.	POOLED VARIANCE ESTIMATE T VALUE	POOLED VARIANCE ESTIMATE DEGREES OF FREEDOM	POOLED VARIANCE ESTIMATE 2-TAIL PROB.	SEPARATE VARIANCE ESTIMATE T VALUE	SEPARATE VARIANCE ESTIMATE DEGREES OF FREEDOM	SEPARATE VARIANCE ESTIMATE 2-TAIL PROB.
PF8SS												
GROUP 1	6	30.0419	6.515	2.660								
					4.63	0.118	-0.26	10	0.800	-0.26	7.07	0.802
GROUP 2	6	31.6649	14.013	5.721								
PF9SS												
GROUP 1	7	32.7497	11.229	4.244								
					4.88	0.147	-0.64	10	0.536	-0.72	8.84	0.488
GROUP 2	5	36.2286	5.083	2.273								
PF10SS												
GROUP 1	2	21.9262	20.803	14.710								
					3.27	0.424	-1.07	3	0.363	-0.92	1.42	0.525
GROUP 2	3	36.8365	11.502	6.641								
PF11SS												
GROUP 1	4	25.0145	11.693	5.847								
					2.20	0.534	-1.24	6	0.260	-1.24	5.26	0.268
GROUP 2	4	38.0338	17.345	8.672								
PF12SS												
GROUP 1	4	21.0067	11.598	5.799								
					1.10	0.938	-0.76	6	0.478	-0.76	5.99	0.478
GROUP 2	4	27.3678	12.179	6.090								
SCHNOX												
GROUP 1	10	824.0000	13.383	4.232								
					1.49	0.559	1.01	18	0.328	1.01	17.32	0.329
GROUP 2	10	818.5000	10.947	3.462								
T2MNDIFF												
GROUP 1	10	-4.0189	3.038	0.961								
					1.76	0.412	6.27	18	0.000	6.27	16.73	0.000
GROUP 2	10	-11.5590	2.289	0.724								

T - T E S T

GROUP 1 - T2SCHGRP EQ 1. Top 25% of Schools (Least Discrepant)
GROUP 2 - T2SCHGRP EQ 3. Bottom 25% of Schools

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	F VALUE	2-TAIL PROB.	POOLED VARIANCE ESTIMATE T VALUE	DEGREES OF FREEDOM	2-TAIL PROB.	SEPARATE VARIANCE ESTIMATE T VALUE	DEGREES OF FREEDOM	2-TAIL PROB.
D2MHDIFF												
GROUP 1	9	2.2008	2.283	0.761	1.92	0.351	2.77	17	0.013	2.73	14.44	0.016
GROUP 2	10	-0.3140	1.649	0.521								
PSCFENGL PERCENT OF ALL 80-81 ENGL.GRADES THAT= F												
GROUP 1	10	133.7794	40.771	12.893	6.52	0.010	0.32	18	0.752	0.32	11.70	0.754
GROUP 2	10	129.3350	15.969	5.050								
PSCFMATH PERCENT OF ALL 80-81 MATH GRADES THAT= F												
GROUP 1	10	129.6709	42.851	13.551	18.83	0.000	0.64	18	0.530	0.64	9.95	0.537
GROUP 2	10	120.7708	9.875	3.123								
PSCFSCI PERCNT OF ALL 8081 SCIENCE GRADES THAT=F												
GROUP 1	10	117.7390	20.059	6.343	9.79	0.002	0.24	18	0.816	0.24	10.82	0.818
GROUP 2	10	116.1704	6.411	2.027								
PSCFSS PERCENT OF ALL 80-81 S.S. GRADES THAT= F												
GROUP 1	10	120.0692	13.227	4.183	1.19	0.797	-0.55	18	0.589	-0.55	17.86	0.589
GROUP 2	10	123.4808	14.445	4.568								
RTEACHAB												
GROUP 1	10	6.8110	1.835	0.580	1.35	0.659	1.62	18	0.123	1.62	17.60	0.123
GROUP 2	10	5.3720	2.135	0.675								

APPENDIX B

SUMMARY OF T-TESTS BETWEEN HIGH AND LOW DISCREPANT SCHOOLS IN TERMS OF READING COMPREHENSION GAIN SCORES

- T - T E S T -

GROUP 1 - D2SCHGRP EQ 1. Top 25% of Schools in terms of Read Comp. Gain Score being least discrepant
GROUP 2 - D2SCHGRP EQ 3. Bottom 25% of Schools

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	F VALUE	2-TAIL PROB.	POOLED VARIANCE ESTIMATE T VALUE	DEGREES OF FREEDOM	2-TAIL PROB.	SEPARATE VARIANCE ESTIMATE T VALUE	DEGREES OF FREEDOM	2-TAIL PROB.
POVRATE												
GROUP 1	10	65.3500	17.059	5.394	2.19	0.239	-0.11	19	0.910	-0.11	15.61	0.912
GROUP 2	11	66.0727	11.537	3.476								
T2NCEALL												
GROUP 1	10	40.5816	3.959	1.252	3.55	0.070	-0.31	19	0.760	-0.32	15.51	0.754
GROUP 2	11	41.4035	7.457	2.248								
T2NCEMIN												
GROUP 1	10	38.7196	3.497	1.106	3.86	0.054	-0.30	19	0.764	-0.31	15.14	0.758
GROUP 2	11	39.4554	6.872	2.072								
T2NCEWHT												
GROUP 1	10	44.9950	4.968	1.571	2.34	0.217	-1.13	19	0.274	-1.15	17.36	0.266
GROUP 2	11	48.1858	7.594	2.290								
D2NCEALL												
GROUP 1	10	-0.7967	2.691	0.835	4.15	0.043	0.27	19	0.792	0.28	14.84	0.786
GROUP 2	11	-1.2507	5.381	1.623								
D2NCEMIN												
GROUP 1	10	-0.0102	2.626	0.831	4.26	0.040	0.89	19	0.386	0.92	14.74	0.375
GROUP 2	11	-1.6876	5.420	1.634								
D2NCEWHT												
GROUP 1	10	-3.0907	3.280	1.037	2.46	0.192	-1.64	19	0.118	-1.67	17.14	0.113
GROUP 2	11	0.0298	5.140	1.550								

T-TEST

GROUP 1 - D2SCHGRP EQ 1. Top 25% of Schools (Least Discrepant)
GROUP 2 - D2SCHGAP EQ 2. Bottom 25% of Schools

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	POOLED VARIANCE ESTIMATE F VALUE	POOLED VARIANCE ESTIMATE 2-TAIL PROB.	POOLED VARIANCE ESTIMATE T VALUE	POOLED VARIANCE ESTIMATE DEGREES OF FREEDOM	POOLED VARIANCE ESTIMATE 2-TAIL PROB.	SEPARATE VARIANCE ESTIMATE T VALUE	SEPARATE VARIANCE ESTIMATE DEGREES OF FREEDOM	SEPARATE VARIANCE ESTIMATE 2-TAIL PROB.
PADA												
GROUP 1	10	77.6651	5.668	1.792	2.20	0.251	0.42	19	0.681	0.42	17.61	0.676
GROUP 2	11	76.3468	8.404	2.534								
P10TSLS												
GROUP 1	10	60.2425	28.597	9.043	1.47	0.576	1.33	19	0.200	1.34	18.85	0.196
GROUP 2	11	61.7311	34.636	10.443								
PSUSR1												
GROUP 1	10	14.7883	7.174	2.269	3.00	0.113	-0.01	19	0.994	-0.01	16.25	0.994
GROUP 2	11	14.8199	12.430	3.748								
PSUSR2												
GROUP 1	10	14.5625	10.722	3.390	4.21	0.035	1.36	19	0.191	1.31	12.77	0.212
GROUP 2	11	9.6689	5.228	1.576								
PSUSR3												
GROUP 1	10	14.2958	10.196	3.224	1.74	0.402	0.78	19	0.445	0.77	16.75	0.453
GROUP 2	11	11.2369	7.735	2.332								
PSUSR4												
GROUP 1	10	8.0591	11.746	3.715	1.92	0.323	0.42	19	0.677	0.42	16.25	0.683
GROUP 2	11	6.1812	6.470	2.554								
PSUSP5												
GROUP 1	10	22.1901	8.483	2.683	1.02	0.972	2.35	19	0.030	2.35	18.78	0.030
GROUP 2	11	13.5196	8.417	2.538								

T - T E S T

GROUP 1 - D2SCHGRP EQ 1. Top 25% of Schools
GROUP 2 - D2SCHGRP EQ 3. Bottom 25% of Schools

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	POOLED VARIANCE ESTIMATE F VALUE	POOLED VARIANCE ESTIMATE 2-TAIL PROB.	POOLED VARIANCE ESTIMATE T VALUE	POOLED VARIANCE ESTIMATE DEGREES OF FREEDOM	POOLED VARIANCE ESTIMATE 2-TAIL PROB.	SEPARATE VARIANCE ESTIMATE T VALUE	SEPARATE VARIANCE ESTIMATE DEGREES OF FREEDOM	SEPARATE VARIANCE ESTIMATE 2-TAIL PROB.
PTOTCF												
GROUP 1	8	23.3565	20.875	7.380								
					1.01	0.986	0.80	14	0.437	0.80	14.00	0.437
GROUP 2	8	14.9758	21.024	7.433								
PAMERNAT												
GROUP 1	10	0.2759	0.226	0.072								
					1.35	0.643	-0.84	19	0.410	-0.84	17.89	0.414
GROUP 2	11	0.3534	0.195	0.059								
PWHITES												
GROUP 1	10	31.0229	10.462	3.308								
					1.13	0.846	0.93	19	0.363	0.93	18.52	0.364
GROUP 2	11	26.8926	9.844	2.968								
PBLACKS												
GROUP 1	10	70.0261	15.933	5.038								
					1.48	0.550	0.66	19	0.520	0.65	17.51	0.524
GROUP 2	11	65.8685	13.107	3.952								
PASIANS												
GROUP 1	10	0.7932	1.864	0.590								
					16.82	0.000	0.68	19	0.505	0.65	9.97	0.530
GROUP 2	11	0.3997	0.455	0.137								
PHISPAN												
GROUP 1	10	2.6247	2.420	0.765								
					7.28	0.006	-0.37	19	0.717	-0.38	12.92	0.708
GROUP 2	11	3.6336	6.531	1.969								
RBNPP RATIO OF BLACK NONPROMOTES TO PROMOTES												
GROUP 1	10	0.1999	0.125	0.040								
					2.13	0.271	0.17	19	0.869	0.17	17.75	0.866
GROUP 2	11	0.1883	0.183	0.055								

APPENDIX B (Cont'd)

T - T E S T

GROUP 1 - D2SCHGRP EQ 1. Top 25% of Schools
GROUP 2 - D2SCHGRP EQ 3. Bottom 25% of Schools

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	F VALUE	2-TAIL PROB.	POOLED VARIANCE ESTIMATE T VALUE	DEGREES OF FREEDOM	2-TAIL PROB.	SEPARATE VARIANCE ESTIMATE T VALUE	DEGREES OF FREEDOM	2-TAIL PROB.
RONPP RATIO OF NONBLK NONPROMOTES TO PROMOTES												
GROUP 1	10	0.2681	0.216	0.068								
					1.06	0.942	0.01	19	0.994	0.01	18.90	0.994
GROUP 2	11	0.2873	0.223	0.067								
PTOTAP PERCENT OF TOTAL THAT ARE NONPROMOTES												
GROUP 1	10	16.5851	6.836	2.162								
					2.70	0.151	0.23	19	0.817	0.24	16.72	0.813
GROUP 2	11	15.6200	11.233	3.387								
PAGEADV PERCENT OF TOTAL THAT ARE AGE ADVANCMNTS												
GROUP 1	10	1.2892	1.955	0.618								
					1.75	0.412	0.04	19	0.965	0.05	18.43	0.964
GROUP 2	11	1.2443	2.589	0.781								
PATOTAL												
GROUP 1	10	11.6943	1.750	0.553								
					7.51	0.006	-0.54	19	0.597	-0.54	12.84	0.586
GROUP 2	11	12.5589	4.797	1.446								
PBTOTAL												
GROUP 1	10	16.0208	2.620	0.828								
					3.32	0.085	-0.13	19	0.895	-0.14	15.80	0.892
GROUP 2	11	16.2497	4.772	1.439								
PCTOTAL												
GROUP 1	10	21.0243	3.492	1.104								
					1.90	0.332	1.49	19	0.152	1.47	16.31	0.161
GROUP 2	11	19.0518	2.534	0.764								
PDTOTAL												
GROUP 1	10	19.9313	3.683	1.165								
					5.77	0.011	1.24	19	0.229	1.20	11.80	0.254
GROUP 2	11	18.4287	1.533	0.462								

APPENDIX B (Cont'd)

T - T E S T

GROUP 1 - D2SCHGRP EQ 1. Top 25% of Schools
GROUP 2 - D2SCHGRP EQ 3. Bottom 25% of Schools

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	F VALUE	2-TAIL PROB.	POOLED VARIANCE ESTIMATE T VALUE	DEGREES OF FREEDOM	2-TAIL PROB.	SEPARATE VARIANCE ESTIMATE T VALUE	DEGREES OF FREEDOM	2-TAIL PROB.
PFTOTAL												
GROUP 1	10	25.7187	8.396	2.655								
					1.36	0.652	-0.51	19	0.614	-0.52	18.94	0.611
GROUP 2	11	27.7743	9.805	2.956								
POTOTAL												
GROUP 1	10	5.6105	3.250	1.028								
					1.72	0.412	-0.26	19	0.798	-0.26	16.81	0.801
GROUP 2	11	5.9366	2.480	0.748								
PF7ENGL												
GROUP 1	6	23.2343	13.871	5.663								
					1.43	0.667	-0.02	11	0.983	-0.02	9.84	0.983
GROUP 2	7	23.3891	11.584	4.378								
PF8ENGL												
GROUP 1	6	23.7229	7.329	2.992								
					2.30	0.378	-0.75	11	0.468	-0.78	10.41	0.455
GROUP 2	7	27.7356	11.125	4.205								
PF9ENGL												
GROUP 1	6	26.0970	12.269	5.009								
					1.01	1.000	-0.89	12	0.393	-0.89	10.97	0.394
GROUP 2	8	31.9905	12.356	4.368								
PF10ENGL												
GROUP 1	3	33.9860	8.369	4.832								
					2.49	0.599	-0.30	5	0.775	-0.32	4.95	0.759
GROUP 2	4	36.6419	13.200	6.600								
PF11ENGL												
GROUP 1	4	24.7662	10.386	5.193								
					1.80	0.642	-0.62	6	0.560	-0.62	5.55	0.560
GROUP 2	4	30.1194	13.919	6.960								

T - T E S T

GROUP 1 - D2SCHGRP EQ 1. Top 25% of Schools
GROUP 2 - D2SCHGRP EQ 3. Bottom 25% of Schools

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	POOLED VARIANCE ESTIMATE F VALUE	POOLED VARIANCE ESTIMATE 2-TAIL PROB.	POOLED VARIANCE ESTIMATE T VALUE	POOLED VARIANCE ESTIMATE DEGREES OF FREEDOM	POOLED VARIANCE ESTIMATE 2-TAIL PROB.	SEPARATE VARIANCE ESTIMATE T VALUE	SEPARATE VARIANCE ESTIMATE DEGREES OF FREEDOM	SEPARATE VARIANCE ESTIMATE 2-TAIL PROB.
PF12ENGL												
GROUP 1	4	14.7161	1.769	0.884	29.70	0.020	-0.81	6	0.447	-0.81	3.20	0.476
GROUP 2	4	18.7003	9.640	4.820								
PF7MATH												
GROUP 1	6	33.7843	15.604	6.370	1.32	0.737	-0.06	11	0.951	-0.06	10.07	0.951
GROUP 2	7	34.2974	13.586	5.135								
PF8MATH												
GROUP 1	6	37.9078	10.342	4.222	1.11	0.928	1.04	11	0.318	1.05	10.85	0.316
GROUP 2	7	31.7164	10.899	4.119								
PF9MATH												
GROUP 1	6	29.5533	17.872	7.296	1.77	0.474	-0.58	12	0.576	-0.55	8.98	0.595
GROUP 2	8	34.3483	13.422	4.745								
PF10MATH												
GROUP 1	3	36.1989	6.245	3.605	1.90	0.726	-2.77	5	0.039	-2.92	5.00	0.033
GROUP 2	4	52.5875	8.611	4.306								
PF11MATH												
GROUP 1	4	22.0198	9.554	4.777	1.07	0.955	-1.11	6	0.311	-1.11	5.99	0.311
GROUP 2	4	29.6271	9.901	4.950								
PF12MATH												
GROUP 1	4	14.3854	9.531	4.765	1.25	0.861	-0.80	6	0.453	-0.80	5.93	0.453
GROUP 2	4	20.1171	10.636	5.318								

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APPENDIX C

SUMMARY OF T-TESTS COMPARING HIGH AND LOW GAIN STUDENTS IN TERMS OF SELECTED VARIABLES

T - T E S T

GROUP 1 - GAINGRP EQ 1. Students who lost 7 or more NCE points
GROUP 2 - GAINGRP EQ 3. Students who gained 7 or more NCE points

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	F VALUE	2-TAIL PROB.	POOLED VARIANCE ESTIMATE T VALUE	DEGREES OF FREEDOM	2-TAIL PROB.	SEPARATE VARIANCE ESTIMATE T VALUE	DEGREES OF FREEDOM	2-TAIL PROB.
P2STAY9 PRE T--CTBS COMPRE.STAY9												
GROUP 1	760	5.0987	1.539	0.056								
					1.20	0.012	17.96	1577	0.000	18.02	1576.66	0.000
GROUP 2	819	3.6374	1.683	0.059								
T2STAY9 POST T--CTBS COMPRE.STAY9												
GROUP 1	760	3.5921	1.631	0.059								
					1.08	0.279	-18.98	1577	0.000	-18.95	1557.02	0.000
GROUP 2	819	5.1209	1.570	0.055								
D2STAY9												
GROUP 1	760	-1.5066	0.880	0.032								
					1.00	0.986	-67.43	1577	0.000	-67.43	1568.38	0.000
GROUP 2	819	1.4835	0.881	0.031								
P1STAY9 PRE T--CTBS VOCAB. STAY9												
GROUP 1	760	4.7461	1.711	0.062								
					1.02	0.813	3.26	1577	0.001	3.26	1570.09	0.001
GROUP 2	819	4.4640	1.726	0.060								
T1STAY9 POST T--CTBS VOCAB. STAY9												
GROUP 1	760	4.4211	1.710	0.062								
					1.04	0.561	-4.57	1577	0.000	-4.58	1572.41	0.000
GROUP 2	819	4.6193	1.746	0.061								
D1STAY9												
GROUP 1	760	-0.3250	1.298	0.047								
					1.05	0.491	-10.27	1577	0.000	-10.28	1573.03	0.000
GROUP 2	819	0.3553	1.330	0.046								
TGRADE												
GROUP 1	760	6.3184	2.179	0.079								
					1.13	0.099	-3.91	1577	0.000	-3.91	1576.60	0.000
GROUP 2	819	6.7607	2.311	0.081								
CGRADE GRADE--CURRENT YEAR												
GROUP 1	760	6.7921	2.297	0.083								
					1.25	0.002	-4.10	1577	0.000	-4.12	1574.80	0.000
GROUP 2	819	7.2967	2.570	0.090								

T - T E S T

GROUP 1 - GAINGRP EQ 1 Students who lost 7 or more NCE points from pre- to post-test, Comprehension
GROUP 2 - GAINGRP EQ 3 Students who gained 7 or more NCE points

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	POOLED VARIANCE ESTIMATE F VALUE	POOLED VARIANCE ESTIMATE 2-TAIL PROB.	POOLED VARIANCE ESTIMATE T VALUE	POOLED VARIANCE ESTIMATE DEGREES OF FREEDOM	POOLED VARIANCE ESTIMATE 2-TAIL PROB.	SEPARATE VARIANCE ESTIMATE T VALUE	SEPARATE VARIANCE ESTIMATE DEGREES OF FREEDOM	SEPARATE VARIANCE ESTIMATE 2-TAIL PROB.
P2NCE PRE T--CTBS COMPREHSN NCE												
GROUP 1	760	50.9053	16.126	0.585								
					1.21	0.007	18.22	1577	0.000	18.29	1576.29	0.000
GROUP 2	819	35.3150	17.751	0.620								
T2NCE POST T--CTBS COMPREHSION NCE %TILE SCR												
GROUP 1	760	34.9903	17.183	0.623								
					1.09	0.206	-19.28	1577	0.000	-19.25	1554.71	0.000
GROUP 2	819	51.2979	16.426	0.574								
D2NCE GAIN OR LOSS--CTBS COMPREHENSION NCE												
GROUP 1	760	-15.9145	8.500	0.308								
					1.05	0.527	-75.37	1577	0.000	-75.31	1562.20	0.000
GROUP 2	819	15.9829	8.311	0.290								
P1NCE PRE T CTBS VOCABULRY NCE												
GROUP 1	760	47.3276	18.041	0.654								
					1.01	0.862	3.22	1577	0.001	3.22	1569.61	0.001
GROUP 2	819	44.3907	18.154	0.634								
T1NCE POST T CTBS VOCABULRY NCE												
GROUP 1	760	43.9934	17.971	0.652								
					1.03	0.709	-4.75	1577	0.000	-4.75	1571.06	0.000
GROUP 2	819	48.3187	18.212	0.636								
D1NCE GAIN OR LOSS--CTBS VOCABULARY NCE												
GROUP 1	760	-3.3342	13.233	0.480								
					1.04	0.594	-10.79	1577	0.000	-10.80	1572.11	0.000
GROUP 2	819	3.9280	13.488	0.471								
AGE12181												
GROUP 1	747	13.2030	2.181	0.080								
					1.15	0.048	-3.37	1548	0.001	-3.38	1548.00	0.001
GROUP 2	803	13.5910	2.342	0.083								
LUNCHCD												
GROUP 1	645	6.2775	0.607	0.024								
					1.06	0.419	-0.09	1338	0.928	-0.09	1335.48	0.928
GROUP 2	695	6.2806	0.626	0.024								

APPENDIX D

CROSSTABULATIONS AND TESTS OF SIGNIFICANCE OF HIGH AND LOW GAIN STUDENTS IN TERMS OF SELECTED VARIABLES

* CROSSTABULATION OF * * * * * * * * * * * * * * * * * * *
GAINGRP by LUNCHCX
* * * * * * * * * * * * * * * * * * * \

CROSSTABULATION OF GAINGRP BY BIRACE MINORITY=5 WHITE=6 MISSING DATA=-999 PAGE 1 OF 1

GAINGRP	BIRACE: MINORITY 5	WHITE 6	ROW TOTAL
D2NCE LE -7	554	193	747
	74.2	25.6	48.2
	47.6	49.4	
	35.7	12.5	
D2NCE GE 7	605	198	803
	75.3	24.7	51.8
	52.2	50.6	
	39.0	12.8	
COLUMN TOTAL	1159	391	1550
	74.8	25.2	100.0

CORRECTED CHI SQUARE = 0.22617 WITH 1 DEGREE OF FREEDOM. SIGNIFICANCE = 0.6344
RAW CHI SQUARE = 0.26526 WITH 1 DEGREE OF FREEDOM. SIGNIFICANCE = 0.5933
PHI = 0.01357
CONTINGENCY COEFFICIENT = 0.01356
LAMBDA (ASYMMETRIC) = 0.0 WITH GAINGRP DEPENDENT. = 0.0 WITH BIRACE DEPENDENT.
LAMBDA (SYMMETRIC) = 0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.00013 WITH GAINGRP DEPENDENT. = 0.00016 WITH BIRACE DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.00015
KENDALL'S TAU B = -0.01357. SIGNIFICANCE = 0.2967
KENDALL'S TAU C = -0.01176. SIGNIFICANCE = 0.2967
GAMMA = -0.03123
SOMERS'S D (ASYMMETRIC) = -0.01561 WITH GAINGRP DEPENDENT. = -0.01179 WITH BIRACE DEPENDENT.
SOMERS'S D (SYMMETRIC) = -0.01343
ETA = 0.00636 WITH GAINGRP DEPENDENT. = 0.01266 WITH BIRACE DEPENDENT.
PEARSON'S R = -0.01338 SIGNIFICANCE = 0.2993

NUMBER OF MISSING OBSERVATIONS = 4091

CROSSTABULATION OF GAINGRP BY RACEW

PAGE 1 OF 1

GAINGRP	COUNT / ROW PCT / COL PCT / TOT PCT	RACEW 1 INAT.AMER	2 WHITE	3 BLACK	4 ASIAN-P.	5 HISPANIC	ROW TOTAL
8		3	193	525	4	22	747
D2NCE LE -7		0.4	25.8	70.3	0.5	2.9	48.2
		50.0	49.4	48.3	44.4	38.6	
		0.2	12.5	33.9	0.3	1.4	
9		3	198	562	5	35	803
D2NCE GE 7		0.4	24.7	70.0	0.6	4.4	51.8
		50.0	50.6	51.7	55.6	61.4	
		0.2	12.8	36.3	0.3	2.3	
COLUMN TOTAL		6 0.4	391 25.2	1087 70.1	9 0.6	57 3.7	1550 100.0

4 OUT OF 10 (40.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 2.892
RAW CHI SQUARE = 2.37927 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = 0.6664
CRAMER'S V = 0.03918
CONTINGENCY COEFFICIENT = 0.03915
LAMBDA (ASYMMETRIC) = 0.0 WITH GAINGRP DEPENDENT. = 0.0 WITH RACEW DEPENDENT.
LAMBDA (SYMMETRIC) = 0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.00112 WITH GAINGRP DEPENDENT. = 0.00101 WITH RACEW DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.00106
KENDALL'S TAU B = 0.02420. SIGNIFICANCE = 0.1657
KENDALL'S TAU C = 0.02277. SIGNIFICANCE = 0.1657
GAMMA = 0.05145
SOMERS'S D (ASYMMETRIC) = 0.02569 WITH GAINGRP DEPENDENT. = 0.02280 WITH RACEW DEPENDENT.
SOMERS'S D (SYMMETRIC) = 0.02416
ETA = 0.03878 WITH GAINGRP DEPENDENT. = 0.03333 WITH RACEW DEPENDENT.
PEARSON'S R = 0.03329 SIGNIFICANCE = 0.0951

NUMBER OF MISSING OBSERVATIONS = 4091

* CROSSTABULATION OF *
GAINGRP BY SEXN SEX OF STUDENT--1=BOY 2=GIRL
* PAGE 1 OF 1

	SEXN		
COUNT / ROW PCT / COL PCT / TOT PCT	MALE 1	FEMALE 2	ROW TOTAL
GAINGRP			
8	365	382	747
D2NCE LE -7	48.9	51.1	48.2
	47.0	49.4	
	23.5	24.6	
9	412	391	803
D2NCE GE 7	51.3	48.7	51.8
	53.0	50.6	
	26.6	25.2	
COLUMN TOTAL	777	773	1550
	50.1	49.9	100.0

CORRECTED CHI SQUARE = 0.83052 WITH 1 DEGREE OF FREEDOM. SIGNIFICANCE = 0.3621
RAW CHI SQUARE = 0.92578 WITH 1 DEGREE OF FREEDOM. SIGNIFICANCE = 0.3360
PHI = 0.02444
CONTINGENCY COEFFICIENT = 0.02443
LAMBDA (ASYMMETRIC) = 0.0 WITH GAINGRP DEPENDENT. = 0.02199 WITH SEXN DEPENDENT.
LAMBDA (SYMMETRIC) = 0.01118
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.00043 WITH GAINGRP DEPENDENT. = 0.00043 WITH SEXN DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.00043
KENDALL'S TAU B = -0.02444. SIGNIFICANCE = 0.1681
KENDALL'S TAU C = -0.02442. SIGNIFICANCE = 0.1661
GAMMA = -0.04888
SOMERS'S D (ASYMMETRIC) = -0.02442 WITH GAINGRP DEPENDENT. = -0.02445 WITH SEXN DEPENDENT.
SOMERS'S D (SYMMETRIC) = -0.02444
ETA = 0.02440 WITH GAINGRP DEPENDENT. = 0.02444 WITH SEXN DEPENDENT.
PEARSON'S R = -0.02442 SIGNIFICANCE = 0.1683

NUMBER OF MISSING OBSERVATIONS = 4091

* C R O S S T A B U L A T I O N O F * * * * * * * * * * * * * * * * * * *
GAINGRP BY PLACECD
* * * * * * * * * * * * * * * * * * * \

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* * * * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N   O F * * * * * * * * * * * * * * * * * * * *
   GAINGRP                                                                  BY  LANGCD
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE  1 OF  1

                    LANGCD
                 COUNT  I
                 ROW PCT I ENGLISH   CROATIAN HUNGARIA    ROW
                 COL PCT I                      N         TOTAL
                 TOT PCT I     0   I     1   I     3   I
                 --------I---------I---------I---------I
GAINGRP                8  I   730   I     2   I     4   I   736
  D2NCE LE -7          I  99.2   I   0.3   I   0.5   I  48.4
                       I  48.4   I  50.0   I  50.0   I
                       I  48.0   I   0.1   I   0.3   I
                      -I---------I---------I---------I
                       9  I   778   I     2   I     4   I   784
  D2NCE GE 7           I  99.2   I   0.3   I   0.5   I  51.6
                       I  51.6   I  50.0   I  50.0   I
                       I  51.2   I   0.1   I   0.3   I
                      -I---------I---------I---------I
                 COLUMN     1508       4         8      1520
                  TOTAL     99.2      0.3       0.5     100.0

     4 OUT OF      6 ( 66.7%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
 MINIMUM EXPECTED CELL FREQUENCY =  1.937
 RAW CHI SQUARE =      0.01207 WITH      2 DEGREES OF FREEDOM.  SIGNIFICANCE =  0.9940
 CRAMER'S V =  0.00282
 CONTINGENCY COEFFICIENT =  0.00282
 LAMBDA (ASYMMETRIC) =  0.0      WITH GAINGRP  DEPENDENT.          =  0.0      WITH LANGCD   DEPENDENT.
 LAMBDA (SYMMETRIC) =  0.0
 UNCERTAINTY COEFFICIENT (ASYMMETRIC) =  0.00001 WITH GAINGRP  DEPENDENT.          =  0.00009 WITH LANGCD   DEPENDENT.
 UNCERTAINTY COEFFICIENT (SYMMETRIC) =  0.00001
 KENDALL'S TAU B = -0.00282.     SIGNIFICANCE =  0.4563
 KENDALL'S TAU C = -0.00050.     SIGNIFICANCE =  0.4563
 GAMMA = -0.03177
 SOMERS'S D (ASYMMETRIC) = -0.01589 WITH GAINGRP  DEPENDENT.          = -0.00050 WITH LANGCD   DEPENDENT.
 SOMERS'S D (SYMMETRIC) = -0.00097
 ETA =  0.0      WITH GAINGRP  DEPENDENT.          =  0.00263 WITH LANGCD   DEPENDENT.
 PEARSON'S R =-0.00261  SIGNIFICANCE =  0.4595

 NUMBER OF MISSING OBSERVATIONS =  4121
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* C R O S S T A B U L A T I O N O F *

GAINGRP BY TGRADE

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CROSSTABULATION OF GAINGRP BY P2STAY9 PRE T--CIDS COMPRE.STAY9 PAGE 1 OF 1

GAINGRP	P2STAY9 BOTTOM 4 PERCENT	5-11 CEN TILE 7 P	12-23 CE NTILE 12	24-40 CE NTILE 17	41-60 CE NTILE 20	61-77 CE NTILE 17	78-89 CE NTILE 12	90-96 CE NTILE 7	97-100 C ENTILE 4	ROW TOTAL
	1	2	3	4	5	6	7	8	9	
8	3	21	82	167	211	141	86	28	21	760
DONCE LE -7	0.4	2.8	10.8	22.0	27.8	18.6	11.3	3.7	2.8	48.1
	2.9	14.8	31.8	49.7	62.1	61.3	76.1	80.0	95.5	
	0.2	1.3	5.2	10.6	13.4	6.9	5.4	1.8	1.3	
9	100	121	176	169	129	89	27	7	1	819
DONCE GE 7	12.2	14.8	21.5	20.6	15.8	10.9	3.3	0.9	0.1	51.9
	97.1	85.2	68.2	50.3	37.9	38.7	23.9	20.0	4.5	
	6.3	7.7	11.1	10.7	8.2	5.6	1.7	0.4	0.1	
COLUMN TOTAL	103 6.5	142 9.0	258 16.3	336 21.3	340 21.5	230 14.6	113 7.2	35 2.2	22 1.4	1579 100.0

RAW CHI SQUARE = 287.34839 WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0
CRAMER'S V = 0.42659
CONTINGENCY COEFFICIENT = 0.39238
LAMBDA (ASYMMETRIC) = 0.30789 WITH GAINGRP DEPENDENT. = 0.03793 WITH P2STAY9 DEPENDENT.
LAMBDA (SYMMETRIC) = 0.14057
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.14929 WITH GAINGRP DEPENDENT. = 0.05264 WITH P2STAY9 DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.07783
KENDALL'S TAU B = -0.35608. SIGNIFICANCE = 0.0000
KENDALL'S TAU C = -0.46184. SIGNIFICANCE = 0.0000
GAMMA = -0.53863
SOMERS'S D (ASYMMETRIC) = -0.27416 WITH GAINGRP DEPENDENT. = -0.46248 WITH P2STAY9 DEPENDENT.
SOMERS'S D (SYMMETRIC) = -0.34424
ETA = 0.42667 WITH GAINGRP DEPENDENT. = 0.41210 WITH P2STAY9 DEPENDENT.
PEARSON'S R = -0.41267 SIGNIFICANCE = 0.0000

NUMBER OF MISSING OBSERVATIONS = 4062

CROSSTABULATION OF GAINGRP BY T2STAY9 POST T--CTBS COMPRE.STAY9 PAGE 1 OF 1

GAINGRP	T2STAY9	1 BOTTOM 4 PERCENTILE	5-11 CEN TILE	12-23 CE NTILE	24-40 CE NTILE	41-60 CE NTILE	61-77 CE NTILE	78-89 CE NTILE	90-96 CE NTILE	97-100 C ENTILE	ROW TOTAL
D2NCE LE -7	8	85	130	153	168	125	70	23	6	0	760
		11.2	17.1	20.1	22.1	16.4	9.2	3.0	0.8	0.0	48.1
		98.8	83.9	61.9	47.2	39.8	29.4	18.7	16.7	0.0	
		5.4	8.2	9.7	10.6	7.9	4.4	1.5	0.4	0.0	
D2NCE GE 7	9	1	25	94	188	189	168	100	30	24	819
		0.1	3.1	11.5	23.0	23.1	20.5	12.2	3.7	2.9	51.9
		1.2	16.1	38.1	52.8	60.2	70.6	81.3	83.3	100.0	
		0.1	1.6	6.0	11.9	12.0	10.6	6.3	1.9	1.5	
COLUMN TOTAL		86	155	247	356	314	238	123	36	24	1579
		5.4	9.8	15.6	22.5	19.9	15.1	7.8	2.3	1.5	100.0

RAW CHI SQUARE = 308.21826 WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0
CRAMER'S V = 0.44161
CONTINGENCY COEFFICIENT = 0.40413
LAMBDA (ASYMMETRIC) = 0.37632 WITH GAINGRP DEPENDENT. = 0.00082 WITH T2STAY9 DEPENDENT.
LAMBDA (SYMMETRIC) = 0.12557
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.16318 WITH GAINGRP DEPENDENT. = 0.05743 WITH T2STAY9 DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.08496
KENDALL'S TAU B = 0.37141. SIGNIFICANCE = 0.0000
KENDALL'S TAU C = 0.41192. SIGNIFICANCE = 0.0000
GAMMA = 0.56119
SOMERS'S D (ASYMMETRIC) = 0.28583 WITH GAINGRP DEPENDENT. = 0.48260 WITH T2STAY9 DEPENDENT.
SOMERS'S D (SYMMETRIC) = 0.35902
ETA = 0.44168 WITH GAINGRP DEPENDENT. = 0.43116 WITH T2STAY9 DEPENDENT.
PEARSON'S R = 0.43114 SIGNIFICANCE = 0.0000

NUMBER OF MISSING OBSERVATIONS = 4062

CROSSTABULATION OF GAINGRP BY PISTAY9 PRE 1--CTBS VOCAB. STAY9

PAGE 1 OF 1

GAINGRP	PISTAY9	1 BOTTOM 4 PERCENT TILE	2 5-11 TILE	3 CEN 7 P NTILE	4 12-23 NTILE	5 CE 24-40 12 NTILE	6 CE 41-60 17 NTILE	7 CE 61-77 20 NTILE	8 CE 78-89 17 NTILE	9 CE 90-96 12 NTILE	10 CE 97-100 C 7 ENTILE	ROW TOTAL
D2NCE LE -7	8	20	43	112	175	167	139	59	22	23	760	
		2.6	5.7	14.7	23.0	22.0	18.3	7.8	2.9	3.0		48.1
		40.8	40.6	41.2	49.6	49.0	52.5	54.6	52.4	53.5		
		1.3	2.7	7.1	11.1	10.6	8.8	3.7	1.4	1.5		
D2NCE GE 7	9	29	63	160	178	174	126	49	20	20	819	
		3.5	7.7	19.5	21.7	21.2	15.4	6.0	2.4	2.4		51.9
		59.2	59.4	58.8	50.4	51.0	47.5	45.4	47.6	46.5		
		1.8	4.0	10.1	11.3	11.0	8.0	3.1	1.3	1.3		
COLUMN TOTAL		49	106	272	353	341	265	108	42	43	1579	
		3.1	6.7	17.2	22.4	21.6	16.8	6.8	2.7	2.7	100.0	

RAW CHI SQUARE = 13.74925 WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0885
CRAMER'S V = 0.09331
CONTINGENCY COEFFICIENT = 0.09291
LAMBDA (ASYMMETRIC) = 0.03684 WITH GAINGRP DEPENDENT. = 0.0 WITH PISTAY9 DEPENDENT.
LAMBDA (SYMMETRIC) = 0.01410
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.00632 WITH GAINGRP DEPENDENT. = 0.00226 WITH PISTAY9 DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.00333
KENDALL'S TAU B = -0.07494. SIGNIFICANCE = 0.0004
KENDALL'S TAU C = -0.09672. SIGNIFICANCE = 0.0004
GAMMA = -0.11600
SOMERS'S D (ASYMMETRIC) = -0.05799 WITH GAINGRP DEPENDENT. = -0.09685 WITH PISTAY9 DEPENDENT.
SOMERS'S D (SYMMETRIC) = -0.07254
ETA = 0.09368 WITH GAINGRP DEPENDENT. = 0.08179 WITH PISTAY9 DEPENDENT.
PEARSON'S R = -0.08178 SIGNIFICANCE = 0.0006

NUMBER OF MISSING OBSERVATIONS = 4062

* CROSSTABULATION OF *
GAINGRP BY TISTAY9 POST T--CTBS VOCAB. STAY9
* PAGE 1 OF 1

	TISTAY9									
COUNT / ROW PCT / COL PCT / TOT PCT	1 BOTTOM 4 PERCENT	5-11 CEN TILE 7 P	12-23 CE NTILE 12	24-40 CE NTILE 17	41-60 CE NTILE 20	61-77 CE NTILE 17	78-89 CE NTILE 12	90-96 CE NTILE 7	97-100 C ENTILE 4	ROW TOTAL
GAINGRP	1	2	3	4	5	6	7	8	9	
8	25	67	145	175	154	108	57	12	17	760
D2NCE LE -7	3.3	8.8	19.1	23.0	20.3	14.2	7.5	1.6	2.2	48.1
	64.1	59.3	52.3	49.0	47.0	43.5	44.9	27.3	37.0	
	1.6	4.2	9.2	11.1	9.8	6.8	3.6	0.8	1.1	
9	14	46	132	182	174	140	70	32	29	819
D2NCE GE 7	1.7	5.6	16.1	22.2	21.2	17.1	8.5	3.9	3.5	51.9
	35.9	40.7	47.7	51.0	53.0	56.5	55.1	72.7	63.0	
	0.9	2.9	8.4	11.5	11.0	8.9	4.4	2.0	1.8	
COLUMN TOTAL	39 2.5	113 7.2	277 17.5	357 22.6	328 20.8	248 15.7	127 8.0	44 2.8	46 2.9	1579 100.0

RAW CHI SQUARE = 24.48274 WITH 8 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0019
CRAMER'S V = 0.12452
CONTINGENCY COEFFICIENT = 0.12357
LAMBDA (ASYMMETRIC) = 0.05921 WITH GAINGRP DEPENDENT. = 0.0 WITH TISTAY9 DEPENDENT.
LAMBDA (SYMMETRIC) = 0.02270
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.01140 WITH GAINGRP DEPENDENT. = 0.00406 WITH TISTAY9 DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.00599
KENDALL'S TAU b = 0.09646. SIGNIFICANCE = 0.0000
KENDALL'S TAU C = 0.12468. SIGNIFICANCE = 0.0000
GAMMA = 0.14910
SOMERS'S D (ASYMMETRIC) = 0.07453 WITH GAINGRP DEPENDENT. = 0.12486 WITH TISTAY9 DEPENDENT.
SOMERS'S D (SYMMETRIC) = 0.09334
ETA = 0.12457 WITH GAINGRP DEPENDENT. = 0.11442 WITH TISTAY9 DEPENDENT.
PEARSON'S R = 0.11442 SIGNIFICANCE = 0.0000

NUMBER OF MISSING OBSERVATIONS = 4062

CROSSTABULATION OF GAINGRP BY DISTAY9 PAGE 1 OF 1

GAINGRP	DISTAY9 1	2	3	4	5	ROW TOTAL
D2NCE LE -7	137	27	9	2	0	175
	78.3	15.4	5.1	1.1	0.0	34.2
	39.7	23.9	29.0	13.3	0.0	
	26.8	5.3	1.8	0.4	0.0	
D2NCE GE 7	208	86	22	13	8	337
	61.7	25.5	6.5	3.9	2.4	65.8
	60.3	76.1	71.0	86.7	100.0	
	40.6	16.8	4.3	2.5	1.6	
COLUMN TOTAL	345	113	31	15	8	512
	67.4	22.1	6.1	2.9	1.6	100.0

1 CUT OF 10 (10.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY = 2.734
RAW CHI SQUARE = 17.42146 WITH 4 DEGREES OF FREEDOM. SIGNIFICANCE = 0.0016
CRAMER'S V = 0.18446
CONTINGENCY COEFFICIENT = 0.18140
LAMBDA (ASYMMETRIC) = 0.0 WITH GAINGRP DEPENDENT. = 0.0 WITH DISTAY9 DEPENDENT.
LAMBDA (SYMMETRIC) = 0.0
UNCERTAINTY COEFFICIENT (ASYMMETRIC) = 0.03145 WITH GAINGRP DEPENDENT. = 0.02154 WITH DISTAY9 DEPENDENT.
UNCERTAINTY COEFFICIENT (SYMMETRIC) = 0.02557
KENDALL'S TAU B = 0.16443. SIGNIFICANCE = 0.0001
KENDALL'S TAU C = 0.15480. SIGNIFICANCE = 0.0001
GAMMA = 0.36319
SOMERS'S D (ASYMMETRIC) = 0.15716 WITH GAINGRP DEPENDENT. = 0.17202 WITH DISTAY9 DEPENDENT.
SOMERS'S D (SYMMETRIC) = 0.16426
ETA = 0.18444 WITH GAINGRP DEPENDENT. = 0.16882 WITH DISTAY9 DEPENDENT.
PEARSON'S R = 0.16882 SIGNIFICANCE = 0.0001

NUMBER OF MISSING OBSERVATIONS = 5129

APPENDIX E

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APPENDIX F

DESCRIPTION OF SUBPOPULATIONS

CRITERION VARIABLE LUNCHCD
BROKEN DOWN BY T2GRP3 IND.STUDENT PST.COMP.SCR.BASED 33% GRPS.
BY RIRACE MINORITY=5 WHITE=6 MISSING DATA=-999

VARIABLE	CODE	VALUE LABEL	SUM	MEAN	STD DEV	VARIANCE	N
FOR ENTIRE POPULATION			276603.0000	6.2569	0.6011	0.3613	(45806)
T2GRP3	1	LO 33%TILE GRP-COMP.	113916.0000	6.1683	0.4901	0.2402	(18468)
RIRACE	5	MINORITY-ALL B,H,ICA	92861.0000	6.1351	0.4409	0.1944	(15136)
RIRACE	6	WHITE---NONHISPANIC	21055.0000	6.3190	0.6483	0.4203	(3332)
T2GRP3	2	MID.33%TILE GRP-COMP	120350.0000	6.2666	0.6097	0.3717	(19205)
RIRACE	5	MINORITY-ALL B,H,ICA	92022.0000	6.2185	0.5588	0.3123	(14798)
RIRACE	6	WHITE---NONHISPANIC	28328.0000	6.4280	0.7332	0.5376	(4407)
T2GRP3	3	HI 33%TILE GRP-COMP.	52337.0000	6.4351	0.7497	0.5621	(8133)
RIRACE	5	MINORITY-ALL B,H,ICA	35210.0000	6.3430	0.6838	0.4676	(5551)
RIRACE	6	WHITE---NONHISPANIC	17127.0000	6.6332	0.8415	0.7081	(2582)

TOTAL CASES = 92505
MISSING CASES = 46699 OR 50.5 PCT.

ANALYSIS OF VARIANCE

VARIABLE	CODE	VALUE LABEL	SUM	MEAN	STD DEV	SUM OF SQ	N
T2GRP3	1	LO 33%TILE GRP-COMP.	113916.0000	6.1683	0.4901	4434.9513	(18468)
T2GRP3	2	MID.33%TILE GRP-COMP	120350.0000	6.2666	0.6097	7139.0221	(19205)
T2GRP3	3	HI 33%TILE GRP-COMP.	52337.0000	6.4351	0.7497	4571.0368	(8133)
	WITHIN GROUPS TOTAL		286603.0000	6.2569	0.5937	16145.0102	(45806)

ANALYSIS OF VARIANCE

SOURCE	SUM OF SQUARES	D.F.	MEAN SQUARE	F	SIG.
BETWEEN GROUPS	405.192	2	202.596	574.760	0.0000
LINEARITY	392.391	1	392.391	1113.203	0.0000
DEV. FROM LINEARITY	12.801	1	12.801	36.316	0.0000
	R = 0.1540	R SQUARED = 0.0237			
WITHIN GROUPS	16145.010	45803	0.352		
	ETA = 0.1565	ETA SQUARED = 0.0245			

DESCRIPTION OF SUBPOPULATIONS

CRITERION VARIABLE SEXA SEX OF STUDENT--1=BOY 2=GIRL
BROKEN DOWN BY T2GRP3 IND.STUDENT PST.COMP.SCR.BASED 33% GRPS.
BY BIRACE MINORITY=5 WHITE=6 MISSING DATA=-999

VARIABLE	CODE	VALUE LABEL	SUM	MEAN	STD DEV	VARIANCE	N
FOR ENTIRE POPULATION			62640.0000	1.5056	0.5000	0.2500	(54887)
T2GRP3	1	LO 33%TILE GRP-COMP.	31520.0000	1.4501	0.4975	0.2475	(21736)
BIRACE	5	MINORITY-ALL B,H,IEA	25262.0000	1.4547	0.4980	0.2480	(17366)
BIRACE	6	WHITE---NONHISPANIC	6258.0000	1.4320	0.4954	0.2454	(4370)
T2GRP3	2	MID.33%TILE GRP-COMP	35126.0000	1.5340	0.4989	0.2489	(22899)
BIRACE	5	MINORITY-ALL B,H,IEA	26181.0000	1.5451	0.4980	0.2480	(16945)
BIRACE	6	WHITE---NONHISPANIC	8945.0000	1.5024	0.5000	0.2500	(5954)
T2GRP3	3	HI 33%TILE GRP-COMP.	15994.0000	1.5601	0.4964	0.2464	(10252)
BIRACE	5	MINORITY-ALL B,H,IEA	10225.0000	1.5728	0.4947	0.2447	(6501)
BIRACE	6	WHITE---NONHISPANIC	5769.0000	1.5380	0.4986	0.2486	(3751)

TOTAL CASES = 92505
MISSING CASES = 37618 OR 40.7 PCT.

ANALYSIS OF VARIANCE

VARIABLE	CODE	VALUE LABEL	SUM	MEAN	STD DEV	SUM OF SQ	N
T2GRP3	1	LO 33%TILE GRP-COMP.	31520.0000	1.4501	0.4975	5379.9396	(21736)
T2GRP3	2	MID.33%TILE GRP-COMP	35126.0000	1.5340	0.4989	5698.3512	(22899)
T2GRP3	3	HI 33%TILE GRP-COMP.	15994.0000	1.5601	0.4964	2525.9871	(10252)
		WITHIN GROUPS TOTAL	82640.0000	1.5056	0.4979	13604.2780	(54887)

ANALYSIS OF VARIANCE

SOURCE	SUM OF SQUARES	D.F.	MEAN SQUARE	F	SIG.
BETWEEN GROUPS	115.727	2	57.863	233.439	0.0000
LINEARITY	105.268	1	105.268	424.683	0.0
DEV. FROM LINEARITY	10.459	1	10.459	42.195	0.0000
	R = 0.0876	R SQUARED = 0.0077			
WITHIN GROUPS	13604.278	54884	0.248		
	ETA = 0.0918	ETA SQUARED = 0.0084			

DESCRIPTION OF SUBPOPULATIONS

CRITERION VARIABLE PINCE PRE 1 CTBS VOCABULRY NCE
BROKEN DOWN BY T2GRP3 IND.STUDENT PST.COMP.SCR.BASED 33% GRPS.
BY BIRACE MINORITY=5 WHITE=6 MISSING DATA=-999

VARIABLE	CODE	VALUE LABEL	SUM	MEAN	STD DEV	VARIANCE	N
FOR ENTIRE POPULATION			1198494.0000	45.2160	17.4139	303.2446	(26506)
T2GRP3	1	LO 33%TILE GRP-COMP.	309380.0000	35.1660	13.9557	194.7607	(11357)
BIRACE	5	MINORITY-ALL B,H,IEA	316523.0000	34.6484	13.9938	195.8253	(9193)
BIRACE	6	WHITE---NONHISPANIC	60857.0000	37.3616	13.5776	184.3520	(2164)
T2GRP3	2	MID.33%TILE GRP-COMP	525746.0000	48.1761	13.7478	189.0031	(10913)
BIRACE	5	MINORITY-ALL B,H,IEA	386167.0000	47.3883	13.8658	192.2596	(8149)
BIRACE	6	WHITE---NONHISPANIC	139579.0000	50.4989	13.1240	172.2400	(2764)
T2GRP3	3	HI 33%TILE GRP-COMP.	273368.0000	64.5345	14.8967	221.9107	(4236)
BIRACE	5	MINORITY-ALL B,H,IEA	156014.0000	62.7787	14.9161	222.4888	(2917)
BIRACE	6	WHITE---NONHISPANIC	115354.0000	67.1053	14.4936	210.0640	(1719)

TOTAL CASES = 92505
MISSING CASES = 65999 OR 71.3 PCT.

ANALYSIS OF VARIANCE

VARIABLE	CODE	VALUE LABEL	SUM	MEAN	STD DEV	SUM OF SQ	N
T2GRP3	1	LO 33%TILE GRP-COMP.	399380.0000	35.1660	13.9557	2211702.1335	(11357)
T2GRP3	2	MID.33%TILE GRP-COMP	525746.0000	48.1761	13.7478	2062401.4969	(10913)
T2GRP3	3	HI 33%TILL GRP-COMP.	273368.0000	64.5345	14.8967	939791.9679	(4236)
		WITHIN GROUPS TOTAL	1198494.0000	45.2160	14.0260	5213895.5983	(26506)

ANALYSIS OF VARIANCE

SOURCE	SUM OF SQUARES	D.F.	MEAN SQUARE	F	SIG.
BETWEEN GROUPS	2823602.290	2	**********	7176.391	0.0000
LINEARITY	2807370.740	1	**********	14270.277	0.0
DEV. FROM LINEARITY	16231.557	1	16231.557	82.507	0.0000
	R = 0.5910	R SQUARED = 0.3493			
WITHIN GROUPS	5213895.590	26503	196.729		
	ETA = 0.5927	ETA SQUARED = 0.3513			

DESCRIPTION OF SUBPOPULATIONS

CRITERION VARIABLE TINCE POST 1 CTBS VOCABULRY NCE
BROKEN DOWN BY T2GRP3 IND.STUDENT PST.COMP.SCR.BASED 33% GRPS.
BY BIRACE MINORITY=5 WHITE=6 MISSING DATA=-999

VARIABLE	CODE	VALUE LABEL	SUM	MEAN	STD DEV	VARIANCE	N
FOR ENTIRE POPULATION			2000728.0000	44.8403	17.9272	321.3856	(44619)
T2GRP3	1	LO 33%TILE GRP-COMP.	651413.0000	33.2948	13.3070	177.0765	(19565)
BIRACE	5	MINORITY-ALL B,H,ICA	517007.0000	32.7531	13.2481	175.5119	(15785)
BIRACE	6	WHITE---NONHISPANIC	134406.0000	35.5571	13.3159	177.3132	(3780)
T2GRP3	2	MID.33%TILE GRP-COMP	890769.0000	48.9159	13.0672	170.7519	(18200)
BIRACE	5	MINORITY-ALL B,H,ICA	650654.0000	48.2788	13.1485	172.8841	(13477)
BIRACE	6	WHITE---NONHISPANIC	239615.0000	50.7336	12.6586	160.2399	(4723)
T2GRP3	3	HI 33%TILE GRP-COMP.	459046.0000	66.9749	14.7917	218.7949	(6854)
BIRACE	5	MINORITY-ALL B,H,ICA	267597.0000	65.8295	14.8296	219.9180	(4065)
BIRACE	6	WHITE---NONHISPANIC	191449.0000	68.6443	14.5786	212.5356	(2789)

TOTAL CASES = 92505
MISSING CASES = 47886 OR 51.8 PCT.

ANALYSIS OF VARIANCE

VARIABLE	CODE	VALUE LABEL	SUM	MEAN	STD DEV	SUM OF SQ	N
T2GRP3	1	LO 33%TILE GRP-COMP.	69.1413.0000	33.2948	13.3070	3464325.5234	(39565)
T2GRP3	2	MID.33%TILE GRP-COMP	890269.0000	48.5159	13.0672	3107514.2109	(18360)
T2GRP3	3	HI 33%TILE GRP-COMP.	496046.0000	66.9719	14.7917	1499401.6837	(6854)
	WITHIN GROUPS TOTAL		2000726.0000	44.8403	13.4501	8071241.4181	(44619)

ANALYSIS OF VARIANCE

SOURCE	SUM OF SQUARES	D.F.	MEAN SQUARE	F	SIG.
BETWEEN GROUPS	6268343.185	2	**********	17324.992	0.0000
LINEARITY	6254082.731	1	**********	34571.156	0.0000
DEV. FROM LINEARITY	14260.454	1	14260.454	78.829	0.0000
	R = 0.6604	R SQUARED = 0.4361			
WITHIN GROUPS	8071241.418	44616	180.905		
	ETA = 0.6612	ETA SQUARED = 0.4371			

DESCRIPTION OF SUBPOPULATIONS

CRITERION VARIABLE DINCE GAIN OR LOSS--CTBS VOCABULARY NCE
BROKEN DOWN BY T2GRP3 IND.STUDENT PST.COMP.SCR.BASED 33% GRPS.
BY BIRACE MINORITY=5 WHITE=6 MISSING DATA=-999

VARIABLE	CODE	VALUE LABEL	SUM	MEAN	STD DEV	VARIANCE	N
FOR ENTIRE POPULATION			10602.0000	0.4001	13.2095	174.4920	(26500)
T2GRP3	1	LO 33%TILE GRP-COMP.	-10569.0000	-0.9328	13.6091	185.2074	(11352)
BIRACE	5	MINORITY-ALL B,H,I&A	-9408.0000	-1.0239	13.7788	189.8557	(9188)
BIRACE	6	WHITE---NONHISPANIC	-1161.0000	-0.5457	12.8594	165.3650	(2164)
T2GRP3	2	MID.33%TILE GRP-COMP	10318.0000	0.9456	12.6491	160.0007	(10912)
BIRACE	5	MINORITY-ALL B,H,I&A	8332.0000	1.0226	13.0110	169.2859	(8148)
BIRACE	6	WHITE---NONHISPANIC	1986.0000	0.7185	11.5157	132.6113	(2764)
T2GRP3	3	HI 33%TILE GRP-COMP.	10873.0000	2.5668	13.1516	172.9644	(4236)
BIRACE	5	MINORITY-ALL B,H,I&A	8021.0000	3.1867	13.7985	190.3999	(2517)
BIRACE	6	WHITE---NONHISPANIC	2852.0000	1.6591	12.0890	146.1433	(1719)

TOTAL CASES = 92505
MISSING CASES = 66005 OR 71.4 PCT.

ANALYSIS OF VARIANCE

VARIABLE	CODE	VALUE LABEL	SUM	MEAN	STD DEV	SUM OF SQ	N
T26RP3	1	LO 33%TILE GRP-COMP.	-10489.0000	-0.9328	13.6091	2102289.7166	(11352)
T26RP3	2	MID.33%TILE GRP-COMP	10318.0000	0.9456	12.6491	1745767.6653	(10912)
T26RP3	3	HI 33%TILE GRP-COMP.	10873.0000	2.1668	13.1516	732504.0932	(4236)
	WITHIN GROUPS TOTAL		10602.0000	0.4001	13.1480	4580561.4752	(26500)

ANALYSIS OF VARIANCE

SOURCE	SUM OF SQUARES	D.F.	MEAN SQUARE	F	SIG.
BETWEEN GROUPS	43300.925	2	21650.462	125.241	0.0000
LINEARITY	43205.222	1	43205.222	249.928	0.0
DEV. FROM LINEARITY	95.702	1	95.702	0.554	0.4569
	R = 0.0967	R SQUARED = 0.0093			
WITHIN GROUPS	4580561.475	26497	172.871		
	ETA = 0.0968	ETA SQUARED = 0.0094			

DESCRIPTION OF SUBPOPULATIONS

CRITERION VARIABLE P2NCE PRE 1--CTBS COMPREHSN NCE
BROKEN DOWN BY T2GRP3 IND.STUDENT PST.COMP.SCR.BASED 33% GRPS.
BY BIRACE MINORITY=5 WHITE=6 MISSING DATA=-999

VARIABLE	CODE	VALUE LABEL	SUM	MEAN	STD DEV	VARIANCE	N
FOR ENTIRE POPULATION			1151031.0000	43.4269	17.2005	295.8588	(26505)
T2GRP3	1	LO 33%TILE GRP-COMP.	372564.0000	32.8077	13.3786	178.9876	(11356)
BIRACE	5	MINORITY-ALL B,H,IEA	298495.0000	32.4698	13.3275	177.6234	(9193)
BIRACE	6	WHITE---NONHISPANIC	74069.0000	34.2436	13.5027	182.3222	(2163)
T2GRP3	2	MID.33%TILE GRP-COMP	509277.0000	46.6670	12.9412	167.4758	(10913)
BIRACE	5	MINORITY-ALL B,H,IEA	375536.0000	46.0950	12.9435	167.5343	(8147)
BIRACE	6	WHITE---NONHISPANIC	133741.0000	48.3510	12.7891	163.5605	(2766)
T2GRP3	3	HI 33%TILE GRP-COMP.	269190.0000	63.5482	14.3442	205.7552	(4236)
BIRACE	5	MINORITY-ALL B,H,IEA	196087.0000	62.0378	14.2027	201.7175	(3516)
BIRACE	6	WHITE---NONHISPANIC	113103.0000	65.7576	14.2674	203.5590	(1720)

TOTAL CASES = 92505
MISSING CASES = 66000 OR 71.3 PCT.

ANALYSIS OF VARIANCE

VARIABLE	CODE	VALUE LABEL	SUM	MEAN	STD DEV	SUM OF SQ	N
T26RP3	1	LO 33%TILE GRP-COMP.	372564.0000	32.8077	13.3786	2032403.9704	(11356)
T26RP3	2	MID.33%TILE GRP-COMP	509277.0000	46.6670	12.9412	1827495.8877	(10913)
T26RP3	3	HI 33%TILE GRP-COMP.	269190.0000	63.5482	14.3442	871373.1756	(4236)
	WITHIN GROUPS TOTAL		1151031.0000	43.4269	13.3613	4731273.0337	(26505)

ANALYSIS OF VARIANCE

SOURCE	SUM OF SQUARES	D.F.	MEAN SQUARE	F	SIG.
BETWEEN GROUPS	3110167.732	2	**********	8710.727	0.0000
LINEARITY	3096946.486	1	**********	17347.395	0.0
DEV. FROM LINEARITY	13221.247	1	13221.247	74.058	0.0
	R = 0.6284	R SQUARED = 0.3949			
WITHIN GROUPS	4731273.034	26502	178.525		
	ETA = 0.6291	ETA SQUARED = 0.3966			

DESCRIPTION OF SUBPOPULATIONS

CRITERION VARIABLE T2NCE POST T--CTBS COMPREHSION NCE %TILE SCR
BROKEN DOWN BY T2GRP3 IND.STUDENT PST.COMP.SCR.BASED 33% GRPS.
BY BIRACE MINORITY=5 WHITE=6 MISSING DATA=-999

VARIABLE	CODE	VALUE LABEL	SUM	MEAN	STD DEV	VARIANCE	N
FOR ENTIRE POPULATION			2449851.0000	44.6344	17.6245	310.6230	(54887)
T2GRP3	1	LO 33%TILE GRP-COMP.	596817.0000	27.5495	9.9591	99.1840	(21736)
BIRACE	5	MINORITY-ALL B,H,ICA	476724.0000	27.4516	10.0141	100.2827	(17366)
BIRACE	6	WHITE---NONHISPANIC	120093.0000	27.9389	9.7288	94.6502	(4370)
T2GRP3	2	MID.33%TILE GRP-COMP	1132165.0000	49.4417	5.2912	27.9964	(22899)
BIRACE	5	MINORITY-ALL B,H,ICA	835272.0000	49.2931	5.2762	27.8378	(16945)
BIRACE	6	WHITE---NONHISPANIC	296893.0000	49.8645	5.3114	28.2109	(5954)
T2GRP3	3	HI 33%TILE GRP-COMP.	718869.0000	70.1199	8.3778	70.1877	(10252)
BIRACE	5	MINORITY-ALL B,H,ICA	452579.0000	69.6168	8.0617	64.9915	(6501)
BIRACE	6	WHITE---NONHISPANIC	266290.0000	70.5917	8.8326	78.0141	(3751)

TOTAL CASES = 92509
MISSING CASES = 37618 OR 40.7 PCT.

ANALYSIS OF VARIANCE

VARIABLE	CODE	VALUE LABEL	SUM	MEAN	STD DEV	SUM OF SQ	N
I2GRP3	1	LO 33%TILE GRP-COMP.	598817.0000	27.5495	9.9591	2155764.6356	(21736)
I2GRP3	2	MID.33%TILE GRP-COMP	1132165.0000	49.4417	5.2912	641060.8619	(22899)
I2GRP3	3	HI 33%TILE GRP-COMP.	718869.0000	70.1199	8.3778	719493.6687	(10252)
		WITHIN GROUPS TOTAL	2449851.0000	44.6344	8.0043	3516319.1661	(54887)

ANALYSIS OF VARIANCE

SOURCE	SUM OF SQUARES	D.F.	MEAN SQUARE	F	SIG.
BETWEEN GROUPS	13532534.418	2	**********	105610.375	0.0
LINEARITY	13527903.710	1	**********	211348.438	0.0
DEV. FROM LINEARITY	4630.708	1	4630.708	72.278	0.0
	R = 0.8908	R SQUARED = 0.7935			
WITHIN GROUPS	3516319.166	54884	64.068		
	ETA = 0.8909	ETA SQUARED = 0.7938			

DESCRIPTION OF SUBPOPULATIONS

CRITERION VARIABLE G2NCE GAIN OR LOSS--CTBS COMPREHENSION NCE
BROKEN DOWN BY T2GRP3 IND.STUDENT PST.COMP.SCR.BASED 33% GRPS.
BY BIRACE MINORITY=5 WHITE=6 MISSING DATA=-999

VARIABLE	CODE	VALUE LABEL	SUM	MEAN	STD DEV	VARIANCE	N
FOR ENTIRE POPULATION			-2138.0000	-0.0807	14.0501	197.4050	(26505)
T2GRP3	1	LO 33%TILE GRP-COMP.	-57112.0000	-5.0292	14.2950	204.3463	(11356)
BIRACE	5	MINORITY-ALL B,H,IEA	-43768.0000	-4.7610	14.1811	201.1036	(9193)
BIRACE	6	WHITE---NONHISPANIC	-13344.0000	-6.1692	14.7181	216.6217	(2163)
T2GRP3	2	MID.33%TILE GRP-COMP	28387.0000	2.6012	12.1222	146.9484	(10913)
BIRACE	5	MINORITY-ALL B,H,IEA	24174.0000	2.9672	12.1442	147.4820	(8147)
BIRACE	6	WHITE---NONHISPANIC	4213.0000	1.5231	11.9947	143.8720	(2766)
T2GRP3	3	HI 33%TILE GRP-COMP.	26587.0000	6.2764	13.5747	184.2737	(4236)
BIRACE	5	MINORITY-ALL B,H,IEA	17706.0000	7.0374	13.8902	191.5509	(2516)
BIRACE	6	WHITE---NONHISPANIC	8881.0000	5.1634	13.1014	171.6469	(1720)

TOTAL CASES = 92505
MISSING CASES = 66000 OR 71.3 PCT.

ANALYSIS OF VARIANCE

VARIABLE	CODE	VALUE LABEL	SUM	MEAN	STD DEV	SUM OF SQ	N
T2GRP3	1	LO 33%TILE GRP-COMP.	-57112.0000	-5.0292	14.2950	2320352.2938	(11356)
T2GRP3	2	MID.33%TILE GRP-CMPR	18367.0000	2.4012	12.1222	1603500.4640	(10913)
T2GRP3	3	HI 33%TILE GRP-COMP.	76567.0000	6.2764	13.5747	780399.2887	(4236)
		WITHIN GROUPS TOTAL	-2134.0000	-0.0807	13.3231	4704252.0465	(26505)

ANALYSIS OF VARIANCE

SOURCE	SUM OF SQUARES	D.F.	MEAN SQUARE	F	SIG.
BETWEEN GROUPS	527769.494	2	263884.747	1486.628	0.0000
LINEARITY	505119.302	1	505119.302	2845.654	0.0000
DEV. FROM LINEARITY	22650.192	1	22650.192	127.603	0.0
	R = 0.3107	R SQUARED = 0.0965			
WITHIN GROUPS	4704252.047	26502	177.506		
	ETA = 0.3176	ETA SQUARED = 0.1009			

DESCRIPTION OF SUBPOPULATIONS

CRITERION VARIABLE 1GRADE
BROKEN DOWN BY 12GRP3 IND.STUDENT PST.COMP.SLK.BASED 33% GRPS.
BY RIRACE MINORITY=5 WHITE=6 MISSING DATA=-999

VARIABLE	CODE	VALUE LABEL	SUM	MEAN	STD DEV	VARIANCE	N
FOR ENTIRE POPULATION			311470.0000	5.6749	3.2732	10.7140	(54887)
12GRP3	1	LO 33%TILE GRP-COMP.	136219.0000	6.3590	3.1428	9.6770	(21736)
RIRACE	5	MINORITY-ALL B,H,ICA	112374.0000	6.4709	3.1225	9.7502	(17366)
RIRACE	6	WHITE---NONHISPANIC	23845.0000	5.4542	3.1836	10.1352	(4370)
12GRP3	2	MID.33%TILE GRP-COMP	125049.0000	5.4609	3.2518	10.5742	(22899)
RIRACE	5	MINORITY-ALL B,H,ICA	91510.0000	5.4009	3.2103	10.3058	(16945)
RIRACE	6	WHITE---NONHISPANIC	33531.0000	5.6317	3.3616	11.3004	(5954)
12GRP3	3	HI 33%TILE GRP-COMP.	48210.0000	4.7025	3.2807	10.7627	(10252)
RIRACE	5	MINORITY-ALL B,H,ICA	28140.0000	4.3286	3.1517	9.9333	(6501)
RIRACE	6	WHITE---NONHISPANIC	20070.0000	5.3506	3.3972	11.5408	(3751)

TOTAL CASES = 92405
MISSING CASES = 37518 OR 40.7 PCT.

ANALYSIS OF VARIANCE

VARIABLE	CODE	VALUE LABEL	SUM	MEAN	STD DEV	SUM OF SQ	N
T2GRP3	1	LO 33%TILE GRP-COMP.	138215.0000	6.3590	3.1428	214675.8034	(21736)
T2GRP3	2	MID.33%TILE GRP-COMP	125049.0000	5.4609	3.2518	242127.7301	(22899)
T2GRP3	3	HI 33%TILE GRP-COMP.	48210.0000	4.7025	3.2807	110328.6161	(10252)
	WITHIN GROUPS TOTAL		311474.0000	5.6749	3.2145	567132.1496	(54887)

ANALYSIS OF VARIANCE

SOURCE	SUM OF SQUARES	D.F.	MEAN SQUARE	F	SIG.
BETWEEN GROUPS	20914.689	2	10457.345	1012.005	0.0000
LINEARITY	20853.362	1	20853.362	2018.076	0.0000
DEV. FROM LINEARITY	61.327	1	61.327	5.935	0.0149
	R =-0.1883	R SQUARED = 0.0355			
WITHIN GROUPS	567132.150	54884	10.333		
	ETA = 0.1887	ETA SQUARED = 0.0356			

DESCRIPTION OF SUBPOPULATIONS

CRITERION VARIABLE CGRADE GRADE--CURRENT YEAR
BROKEN DOWN BY T2GRP3 IND.STUDENT PST.COMP.SCR.BASED 33% GRPS.
BY BIRACE MINORITY=5 WHITE=6 MISSING DATA=-999

VARIABLE	CODE	VALUE LABEL	SUM	MEAN	STD DEV	VARIANCE	N
FOR ENTIRE POPULATION			3[illegible]0003.0000	6.3768	3.1708	10.0541	(54887)
T2GRP3	1	LO 33%TILE GRP-COMP.	152142.0000	6.5995	3.0839	9.5102	(21736)
BIRACE	5	MINORITY-ALL B,H,ICA	123468.0000	7.1098	3.0651	9.3947	(17366)
BIRACE	6	WHITE---NONHISPANIC	28674.0000	6.5616	3.1195	9.7313	(4370)
T2GRP3	2	MID.33%TILE GRP-COMP	141421.0000	6.1759	3.1465	9.9005	(22899)
BIRACE	5	MINORITY-ALL B,H,ICA	103795.0000	6.1254	3.1125	9.6876	(16945)
BIRACE	6	WHITE---NONHISPANIC	37626.0000	6.3194	3.2373	10.4802	(5954)
T2GRP3	3	HI 33%TILE GRP-COMP.	56440.0000	5.5053	3.1433	9.8805	(10252)
BIRACE	5	MINORITY-ALL B,H,ICA	33557.0000	5.1618	3.0274	9.1652	(6501)
BIRACE	6	WHITE---NONHISPANIC	22883.0000	6.1005	3.2502	10.5640	(3751)

TOTAL CASES = 92505
MISSING CASES = 37618 OR 40.7 PCT.

ANALYSIS OF VARIANCE

VARIABLE	CODE	VALUE LABEL	SUM	MEAN	STD DEV	SUM OF SQ	
T2GRP3	1	LO 33%TILE GRP-COMP.	152142.0000	6.9995	3.0839	206703.9954	(21736)
T2GRP3	2	MID.33%TILE GRP-COMP	141421.0000	6.1759	3.1465	226700.6150	(22899)
T2GRP3	3	HI 33%TILE GRP-COMP.	56440.0000	5.5053	3.1433	101284.7156	(10252)
		WITHIN GROUPS TOTAL	350003.0000	6.3768	3.1212	534689.5259	(54887)

ANALYSIS OF VARIANCE

SOURCE	SUM OF SQUARES	D.F.	MEAN SQUARE	F	SIG.
BETWEEN GROUPS	17141.037	2	8570.516	879.733	0.0000
LINEARITY	17067.386	1	17067.386	1751.907	0.0000
DEV. FROM LINEARITY	73.646	1	73.646	7.559	0.0060
	R = -0.1759	R SQUARED = 0.0309			
WITHIN GROUPS	534689.526	54884	9.742		
	ETA = 0.1762	ETA SQUARED = 0.0311			

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CRITERION VARIABLE AGE12181
BROKEN DOWN BY T2GRP3 IND.STUDENT PST.COMP.SCR.BASED 33% GRPS.
BY BIRACE MINORITY=5 WHITE=6 MISSING DATA=-999

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ANALYSIS OF VARIANCE

VARIABLE	CODE	VALUE LABEL	SUM	MEAN	STD DEV	SUM OF SQ	A
T2GRP3	1	LO 33%TILE GRP-COMP.	291144.6223	13.3946	3.1918	221431.9893	(217361)
T2GRP3	2	MID.33%TILE GRP-COMP	281657.4585	12.3000	3.2516	242093.1580	(228999)
T2GRP3	3	HI 33%TILE GRP-COMP.	117236.8638	11.4355	3.2733	109832.9175	(102521)
	WITHIN GROUPS TOTAL		690038.9446	12.5720	3.2321	573358.0648	(548881)

ANALYSIS OF VARIANCE

SOURCE	SUM OF SQUARES	D.F.	MEAN SQUARE	F	SIG.
BETWEEN GROUPS	29643.289	2	14821.645	1410.784	0.0000
LINEARITY	29476.892	1	29476.892	2821.639	0.0000
DEV. FROM LINEARITY	166.398	1	166.398	15.928	0.0001
	R = -0.2211	R SQUARED = 0.0489			
WITHIN GROUPS	573358.065	54884	10.447		
	ETA = 0.2217	ETA SQUARED = 0.0492			

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T - T E S T

GROUP 1 - T2G8P3 10 1. READING COMPREHENSION POST-TEST LESS THAN OR EQUAL TO 33 PERCENTILE (40.7 NCE)
GROUP 2 - T2G8P3 FE 3. READING COMPREHENSION POST-TEST GREATER THAN OR EQUAL TO 67 PERCENTILE (59.3 NCE)

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	POOLED VARIANCE ESTIMATE F VALUE	POOLED VARIANCE ESTIMATE 2-TAIL PROB.	POOLED VARIANCE ESTIMATE T VALUE	POOLED VARIANCE ESTIMATE DEGREES OF FREEDOM	POOLED VARIANCE ESTIMATE 2-TAIL PROB.	SEPARATE VARIANCE ESTIMATE T VALUE	SEPARATE VARIANCE ESTIMATE DEGREES OF FREEDOM	SEPARATE VARIANCE ESTIMATE 2-TAIL PROB.
IGRADE												
GROUP 1	22250	6.3530	3.195	0.021	1.09	0.000	44.22	32917	0.000	43.57	20294.32	0.000
GROUP 2	13665	4.6870	3.291	0.028								
CGRADE GRADE--CURRENT YEAR												
GROUP 1	22250	6.0378	3.224	0.022	1.02	0.176	40.61	32917	0.000	40.45	20821.65	0.000
GROUP 2	13665	5.2901	3.261	0.028								
AGE12181												
GROUP 1	21736	13.3946	3.192	0.022	1.05	0.003	50.81	31986	0.000	50.35	19644.08	0.000
GROUP 2	10252	11.4355	3.233	0.032								
BIRACE MINORITY=1, WHITE=6 MISSING DATA=-999												
GROUP 1	21736	5.2010	0.401	0.003	1.44	0.0	-32.31	31986	0.000	-30.08	17174.76	0.000
GROUP 2	10252	5.3659	0.482	0.005								

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